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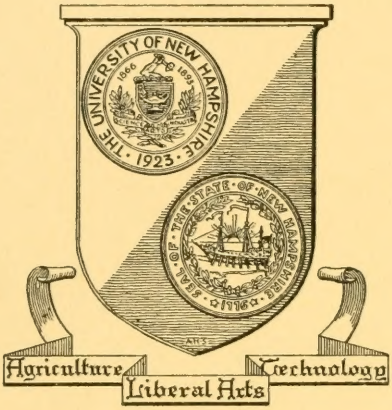

The University
of
New Hampshire

PRESENTED BY
THE STATE OF NEW HAMPSHIRE,
FOR THE USE OF THE TOWN.
EZRA S. STEARNS,
Secretary of State.

STATE

OF

NEW HAMPSHIRE.

ANNUAL REPORTS,

1890.

Vol. III.

MANCHESTER:
JOHN B. CLARKE, PUBLIC PRINTER.
1891.

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CONTENTS.

VOL. III.

	No. Pages
Report of the Railroad Commissioners	470
Report of the Registrar of Vital Statistics	320
Report of the College of Agriculture	176
Report of the State Librarian	216
Report of the Industrial School	120
Report of the Normal School	20
Report of the Fish Commissioners	32

FORTY-SIXTH

ANNUAL REPORT

OF THE

RAILROAD COMMISSIONERS

OF THE

STATE OF NEW HAMPSHIRE,

1890.

MANCHESTER:
JOHN B. CLARKE, PUBLIC PRINTER.
1891.

CONTENTS.

	PAGE.
Accidents	28
Accident Reports	37
Ashuelot Railroad Return	147
Assets, Liabilities, and Dividends	402
Atlantic & St. Lawrence Railroad Returns	151, 249
Boston, Concord & Montreal Railroad Return	158
Boston & Maine System:	
Returns	165, 271
How Constituted	8
Condition of	22
Charges upon	15
Cheshire Railroad Returns	192, 316
Compromise and Consolidation	4
Concord & Montreal System:	
Return	256
How Constituted	7
Condition of	24
Charges upon	13
Concord & Claremont Railroad Return	218
Concord Street Railway	368A
Connecticut River Railroad Return	359
Correspondence	136
Crossings	26
Crossing Decisions	121
Earnings and Expenses	400
Eastern (N. H.) Railroad Return	288
Fares and Freights	11
Fitchburg Railroad Returns	204, 331
Laconia Street Railway Returns	378, 392
Land Damage Awards	119
Leases and Consolidations	Appendix

Maine Central Railroad Return 242
Manchester & Lawrence Railroad Returns . . . 178, 291
Manchester Street Railway Returns 369, 383
Mileage 405
Monadnock Railroad Returns 200, 324, 327
Mount Washington Railroad Return 341

Nashua & Lowell Railroad Returns 181, 294
Nashua Street Railway Returns 373, 387
New Roads 20
Northern Railroad Return 215
Number of Stockholders 404

Pemigewasset Valley Railroad Returns 161, 267
Peterborough Railroad Return 227
Petitions and Findings 124
Portsmouth & Dover Railroad Returns 184, 297
Portsmouth, Great Falls & Conway Railroad Return . . 300
Portland & Rochester Railroad Returns 221, 346

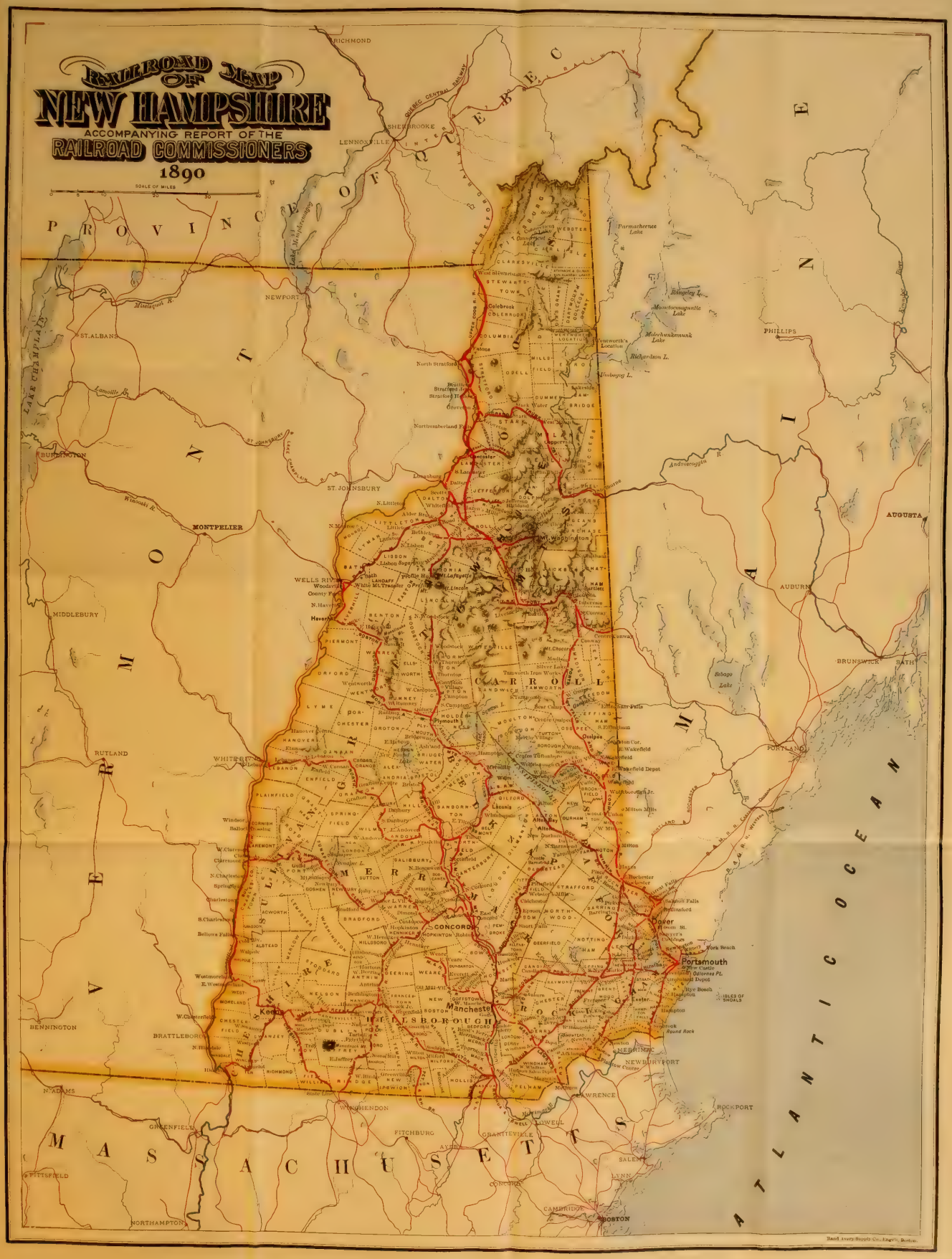
Railroad Taxes 409, 410
Railroad Laws 33

Street Railways 32
Sullivan County Railroad Returns 230, 352

Tilton & Belmont Railroad 21

Upper Coos Railroad Return 237

West Amesbury Branch Return 305
Wolfeborough Railroad Return 308
Worcester, Nashua & Rochester Railroad Returns . 187, 311


RAILROAD MAP OF NEW HAMPSHIRE
ACCOMPANYING REPORT OF THE RAILROAD COMMISSIONERS
1890
SCALE OF MILES
PROVINCE OF QUEBEC
PROVINCE OF NEW BRUNSWICK
VERMONT
MASSACHUSETTS
ATLANTIC OCEAN
LAKE CHAMPLAIN
RICHMOND
SHERBROOKE
LENNOXVILLE
NEWPORT
ST. ALBANS
BURLINGTON
ST. JOHNSBURY
MONTPELIER
WELLS RIVER
MIDDLEBURY
RUTLAND
WHITEHALL
BENNINGTON
BRATTLEBORO
N. ADAMS
GREENFIELD
PITTSFIELD
NORTHAMPTON
FITCHBURG
WORCESTER
CAMBRIDGE
BOSTON
SALEM
LYNN
ROCKPORT
NEWBURYPORT
MERRIMAC
LAWRENCE
LOWELL
GRANITEVILLE
WARREN
PHILLIPS
AUGUSTA
AUBURN
BRUNSWICK
BATH
PORTLAND
Haverhill
Keene
Manchester
CONCORD
Dover
Portsmouth
Rye Beach
York Beach
Isles of Shoals
Exeter
Hampton
Rocky Point
Rand Avery Supply Co. Engrs. Boston

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PART 1.

COMMISSIONERS' REPORT.

STATE OF NEW HAMPSHIRE.

To the Legislature:

The Railroad Commission created by the act of 1883 respectfully submits its sixth report. In adapting the statute law to the amended constitution of the State, the Legislature of 1889 provided that reports of this Board should be furnished in January instead of June, and that this report should cover the time from the date of the one printed in the spring of 1889, which was for the year ending September 30, 1888, until June 30, 1890. The Board has accordingly required of railway corporations two sets of returns, one for the nine months ending June 30, 1889, and the other for the year ending June 30, 1890, both of which are printed in this volume. Hereafter returns will be for twelve months ending June 30, which corresponds to the requirements in most other States and to the rule of the Interstate Commerce Commission, thus saving our corporations the trouble and expense of preparing different returns for the several States in which their roads are located and for the Interstate Commission. In general, it may be said that this report relates to the calendar years 1889 and 1890.

One set of returns being for nine months instead of a year, and several of the roads that have formerly made returns having been eliminated by consolidations or purchases, or incorporated in other systems by leases, it is impracticable to prepare comparative tables showing their

expenses and earnings, and no attempt has been made to do this. Returns of roads that have been consolidated or leased since July 1, 1889, are necessarily for fractions of a year.

COMPROMISE AND CONSOLIDATION.

The contest between the Concord and Boston & Maine corporations for the possession of the roads included in the Northern and Boston, Concord & Montreal systems, which began soon after the passage of the Colby act in 1883, and culminated in the demoralizing and disgraceful struggle over the Hazen bill in 1887, terminated soon after the meeting of the Legislature in June, 1889, in a compromise which was arranged by the managers of the contending corporations and was placed upon the statute book without serious opposition. This statute authorized the Boston & Maine to lease the Northern, Concord & Claremont, Peterborough & Hillsborough, Nashua & Lowell, Wilton and Peterborough roads and to acquire by purchase the Eastern Railroad in New Hampshire, the Portsmouth, Great Falls & Conway Railroad, the Portland, Saco & Portsmouth Railroad Company, the Wolfeborough Railroad, the Portsmouth & Dover Railroad, the Worcester, Nashua & Rochester Railroad, the Manchester & Lawrence Railroad, the West Amesbury Branch Railroad, the Dover & Winnipesaukee Railroad, and the Portland & Rochester Railroad. It further authorized the Concord Railroad Corporation and the Boston, Concord & Montreal Railroad Corporation to unite and form a new railroad corporation with a capital of four million eight hundred thousand dollars, to be apportioned as follows:

Three million dollars to the stockholders of the Concord Railroad Corporation in part compensation for the property, rights, and franchises of that corporation acquired by its original capital and by the new capital contributed by stockholders from time to time in earnings not heretofore divided; the balance thereof as compen-

sation for the property, rights, and franchises of the Boston, Concord & Montreal Railroad and the interests of its stockholders therein; but said last-named stock shall be issued subject to the following preferment and limitations: Eight hundred thousand dollars thereof shall be preferred stock, entitled to semi-annual dividends not exceeding three per cent from the net earnings, in preference and priority to other stocks of the corporation, and one million dollars thereof shall be entitled only to such dividends from net earnings, not exceeding six per cent in any one year, as can be made from the saving on fixed charges effected by refunding from time to time the existing indebtedness of said Boston, Concord & Montreal Railroad (the rate of interest on its present floating indebtedness to be taken as the average rate on that indebtedness since 1884, but not to exceed in any event six per cent per annum).

The new corporation to be thus formed was empowered to acquire by purchase the roads, franchises, and property of the Mount Washington Railway, the Whitefield & Jefferson Railroad, the New Zealand Valley Railroad, the Profile & Franconia Notch Railroad, the Pemigewasset Valley Railroad, the Lake Shore Railroad, the Tilton & Belmont Railroad, the Suncook Valley Railroad, the Suncook Valley Extension Railroad, the Manchester & North Weare Railroad, the Concord & Portsmouth Railroad, and the Nashua, Acton & Boston Railroad; all on such terms and conditions as should be agreed upon by the board of directors of the purchasing corporation and the boards of directors of the selling corporations respectively, and as should be approved by the votes of two thirds of the stock of the purchasing corporations and by the votes of two thirds of the stock of the selling corporations respectively.

Said Boston & Maine Railroad was further authorized to acquire by purchase the road, franchises, and property of any railroad corporation incorporated under the laws of either of the States of Massachusetts, Vermont, or Maine — whose road was leased to or operated by said Boston & Maine Railroad — in such manner and upon such terms in each case as the laws of the State of the selling corporation may authorize and prescribe, and upon making

any such purchases and for the purposes thereof was given all the powers and privileges conferred upon it by the laws of the State of said selling corporation, and in addition the Upper Coös road was given permission to extend its tracks to a junction with the Boston, Concord & Montreal, or Maine Central, and to lease its road to any other corporation. Indeed, these acts went to the very extreme in authorizing the consolidation of existing and projected railroads within the debatable territory, which included nearly all the State, into two great systems, the only restriction being that neither should encroach upon the business which both had agreed the other should control, and if there is anything in the way of legislative assent which is necessary to the perfection and carrying out of the plans of the managers of these two corporations which was not included in that act, the omission was due to their lack of foresight. They got all they asked for. They asked for all they expected to ever need. The corporations interested were not slow in taking advantage of this legislation, and since the passage of the compromise bill the Boston & Maine has bought the Eastern and Great Falls & Conway upon terms stated in the agreements, which are published in an appendix to this volume, and has renewed the lease of the Northern and its branches in the name of the Boston & Lowell, which is a part of the Boston & Maine system. The Upper Coös has been leased to the Maine Central, and extended from North Stratford to the Vermont line, thence across the Connecticut river into Vermont, thence through two Vermont towns and over the river into Lancaster, and thence through Lancaster, Jefferson, and Whitefield to a junction with the Maine Central or Portland & Ogdensburg extension from Fabyan's to Scott's, in the town of Carroll. The Concord and Boston, Concord & Montreal have been consolidated in accordance with the provisions of the act under the name of the Concord & Montreal, which has acquired by purchase the Lake

Shore, the Tilton & Belmont, the Whitefield & Jefferson, and the Suncook Valley extension, secured a controlling interest in the Profile & Franconia, contracted to operate the Kilkenny, and is building in company with the Boston & Maine the Franklin & Tilton.

In addition to these unions under the acts of 1889, the Cheshire and Monadnock have been consolidated with the Fitchburg, and became a part of that system October 1, as it was provided might be done in an act passed in 1887.

These and previous consolidations have placed the railroads of New Hampshire in groups or systems, each of which is practically one road, as follows :

GRAND TRUNK SYSTEM.

Atlantic & St. Lawrence road . . .	52 miles.

CONNECTICUT RIVER SYSTEM.

Ashuelot	23 miles.
Sullivan County	26 "
Total	49 miles.

FITCHBURG SYSTEM.

Cheshire	43 miles.
Monadnock	14 "
Peterborough & Shirley	10 "
Total	67 miles.

CONCORD & MONTREAL SYSTEM.

Concord main line	34.5 miles.
Portsmouth & Concord	47.5 "
Manchester & North Weare	19 "
Acton	4.5 "
Suncook Valley	19.5 "
Suncook Valley Extension	4.5 "
Old Boston, Concord & Montreal . . .	146.5 "

Wing Road Branch	20.5	miles.
Pemigewasset Valley	20	"
Whitefield & Jefferson	15	"
Profile & Franconia	14	"
Lake Shore	17	"
Tilton & Belmont	4	"
Tilton & Franklin	5	"
Total	370.5	miles.

BOSTON & MAINE SYSTEM.

Boston & Maine main line	35	miles.
Eastern in New Hampshire	16	"
Great Falls & Conway	70	"
Portsmouth & Dover	11	"
West Amesbury Branch	2	"
Worcester, Nashua & Rochester	55	"
Manchester & Lawrence	22	"
Dover & Winnipesaukee	29	"
Portland & Rochester	3.5	"
Peterborough	10.5	"
Wilton	15.5	"
Wolfeborough	12	"
Northern	69.5	"
Bristol Branch	15	"
Concord & Claremont	56	"
Hillsborough Branch	15	"
Peterborough & Hillsborough	18.5	"
Manchester & Keene	30	"
Nashua & Lowell	5	"
Upper Coös (Maine Central)	42	"
Portland & Ogdensburg (Maine Central)	57	"
Total	589	miles.

Thus five corporations control what were chartered as 42 distinct and independent roads, with a mileage of 1,128

miles, of which 960 miles, or nearly nine tenths, is in the hands of the Boston & Maine and Concord & Montreal.

FRUITS OF CONSOLIDATION.

Such an aggregation of capital and power would have terrified the citizens of New Hampshire no longer than ten years ago, and it is doubtless looked upon with grave apprehension by many of them now, but it is to be said that thus far the results of the consolidations by which nearly all our railroads outside the Connecticut valley have been merged in two systems have been such as to justify those who have been instrumental in bringing them about. In considering this subject it should be remembered that the sales, leases, and other conveyances which have taken place under the compromise act of 1889 are in most cases but the legal consummation of unions formed years ago, and that we have had experience enough with the new order of things to enable us to contrast it with that which preceded it. The Eastern, with its subsidiary roads, was leased to the Boston & Maine six years ago, and the Boston & Lowell, with its leased lines, including the Northern and its branches, became a part of the Boston & Maine system soon after.

NOTE. — The Manchester & Keene is owned jointly by the Boston & Maine and Concord & Montreal, but operated by the Boston & Maine, and the Franklin & Tilton is being constructed at the joint expense of the same corporations. The Maine Central, to which the Portland & Ogdensburg and Upper Coös are leased, is operated independently as far as the public is concerned, but the Boston & Maine is so largely an owner of its stock that it controls it, at least to the extent that the two roads are so managed as to promote the interest of both. Consequently, the Manchester & Keene, the Portland & Ogdensburg, and Upper Coös are treated as parts of the Boston & Maine system, while the Franklin & Tilton is placed in the Concord & Montreal column. The Profile & Franconia is a narrow gauge summer road, and the Kilkenny a lumber road used only in winter.

The Worcester & Nashua and the Manchester & Lawrence were leased about three years ago. The Boston, Concord & Montreal and its branches passed into the possession of the Concord in 1887, but were leased to the Lowell five years before and have not since been operated independently. So that the only really new combinations which have destroyed the independence of existing roads are those of the Cheshire with the Fitchburg and of the Upper Coös with the Maine Central.

It was scarcely to be expected that the physical condition of New Hampshire railroads would be rapidly improved during the transition period, while there was great uncertainty and doubt as to who was to reap the benefit of permanent betterments upon them, but the fact is that during that period none of them have been permitted to grow worse, and some of them which were physical wrecks when the Colby bill was passed will now bear close inspection. Taken together they compare favorably with those in any other State where the business is similar in volume and character, and when the improvements already projected are completed, nearly all of them will be above reasonable criticism. Very little iron remains in the tracks upon the trunk lines, ties have been seasonably renewed and multiplied, roadbeds have been generally rebuilt and repaired, curves have been eliminated, fences and ditches put in fair shape, bridges rebuilt or strengthened, and at many points new, attractive, and commodious stations have taken the place of the dilapidated, inconvenient, and unsightly structures which were originally built. There are glaring exceptions to this upon some of the branches, but they do not in any way discredit the statement that our roads generally testify to advantages which have been gained by conveying them to strong corporations possessing ample resources and managed by progressive men. The rolling stock in use upon our through lines is not excelled anywhere. The train service is beyond the hopes

even of those who patronized our roads when they were in short but independent lines and were supposed to be sharply competing for business. Trains are run frequently, swiftly, and safely, and to satisfy the demands of travelers and shippers.

But it is in the matter of fares and freights that the public has received the greatest concessions and the most benefits. For ten years prior to the passage of the Colby bill, there was little material change in railroad fares upon our roads, and upon most of them freight rates were stationary unless fixed, as they often were, by special contract. Coal freights were reduced about 75 per cent on the Concord road, and a less per cent on some others. With a view to instituting a comparison between the charges upon our principal roads prior to their consolidation, and in 1890, after they had been grouped in a few systems, the Board has called upon their managers for information upon these points, and in reply has received the following statements :

CONNECTICUT RIVER SYSTEM.

There was little reduction in passenger rates upon this system during the period spoken of. Upon the Sullivan County road fares are the same now as in 1881, and upon the Ashuelot the same as in 1873, viz., mileage tickets two cents per mile (good only to the person named upon them), local fares three cents per mile, and through fares about two and three fourths cents. The average freight rate upon the Sullivan has been reduced from .03049 per ton per mile to .02744, and upon the Ashuelot from .01126 to .00838. Coal freights from Windsor to Bellows Falls are now $1 as against $1.40, and lumber freights are $8.96 as against $12 in 1881. From Boston to Claremont, via this route, first-class freights have been cut from 46 to 29, and other classes in proportion. From Vernon to Keene coal freights are now 38 cents against $1.10, and

lumber freights are $8.96 against $11 nine years ago. There has also been a reduction of about ten per cent on general freights of all classes.

CHESHIRE SYSTEM.

Upon the Cheshire, local freights were, last September, three and one half cents, and upon the Monadnock four cents, the same as ten years before. Freights, however, had been reduced between Boston and Keene from 42 to 26 cents, and to Bellows Falls from 44 to 29 for first class, with corresponding concessions upon other classes. When the Fitchburg took possession of the Cheshire, October 1, changes were made in the tariff as stated in the following:

FITCHBURG RAILROAD COMPANY,
OFFICE OF THE PRESIDENT,
BOSTON, November 15, 1890.

H. M. Putney, Chairman N. H. Railroad Commission, Manchester, N. H.:

DEAR SIR, — In reply to your inquiry of November 6, I would say the following changes in rates of fare and freight have been made on the Cheshire and Monadnock roads since the consolidation with the Fitchburg Railroad:

Passenger fares for local tickets on the Cheshire division have been reduced one half to three quarters cents per mile, making a uniform fare of two and three fourths cents per mile over the entire line.

Passenger fares for local tickets on the Monadnock branch have been reduced one and one quarter cents per mile, making a uniform fare of two and three fourths cents per mile over the branch.

Thousand-mile tickets at two cents per mile are now sold at all stations on the Cheshire division and Monadnock branch, good for bearer, his family or friends, and are transferable. Previous to the consolidation with the Cheshire, thousand-mile tickets over its line were good only for the person named, and not transferable.

There has been no change in the freight rates on the Cheshire division.

On the Monadnock branch the rates on through business, east and west bound, for points west of the western termini of the

trunk lines, viz., Suspension Bridge, Buffalo, Salamanca, Pittsburg, and Bellaire, have been reduced as follows:

	1	2	3	4	5	6
West Rindge	8	7	6	5	4	3
East Jaffrey	11	10	9	7	6	5
Peterborough	15	14	11	8	7	6

On local and short point traffic there has been no change.

Yours truly,

H. S. MARCY, *President.*

CONCORD & MONTREAL SYSTEM.

When the Lowell road leased the Boston, Concord & Montreal in 1884 it at once cut local fares, which ranged from three and one half to five cents per mile, to about three cents, and reduced freights, which were without uniformity, to regular and much lower rates, and in 1887 the Concord reduced locals upon its main line to two cents, and upon its branches to two and one fourth cents, and made very great concessions in its freight tariff. It subsequently made its mileage tickets, which had been limited to one person, good to bearer, and good upon its entire system. The following tables, prepared by the officers of the road, convey an idea of the reductions upon this line since the beginning of the agitation which has resulted in its extension from Concord to Groveton:

COMPARISON OF RAILROAD FARES, 1873 AND 1890.

	To Concord.		To Manchester		To Nashua.	
	1873.	1890.	1873.	1890.	1873.	1890.
Concord	.....	.....	$0.50	$0.36	$1.00	$0.70
Manchester	$0.50	$0.36	.....	.....	.50	.34
North Weare	1.10	.85	.60	.49	1.10	.83
Tilton	.70	.65	1.20	1.01	1.70	1.35
Laconia	1.10	.95	1.55	1.31	2.05	1.65
Plymouth	2.20	1.80	2.65	2.16	3.15	2.50
Woodsville	4.05	3.25	4.50	3.61	5.00	3.95
Littleton	5.00	4.20	5.45	4.56	5.95	4.90
Lancaster	6.00	5.15	6.45	5.51	6.95	5.85

COMPARISON OF RAILROAD FARES, 1873 AND 1890. — *Continued.*

	To Newmarket Junction.		To Portsmouth		To Boston.	
	1873.	1890.	1873.	1890.	1873.	1890.
Concord	$1.30	$1.14	$1.60	$1.39	$2.00	$1.66
Manchester	.85	.78	1.15	1.03	1.50	1.30
North Weare	1.45	1.27	1.75	1.52	2.10	1.79
Tilton	2.05	1.79	2.35	2.04	2.70	2.30
Laconia	2.40	2.09	2.70	2.34	3.05	2.60
Plymouth	3.50	2.94	3.80	3.19	4.15	3.45
Woodsville	5.35	4.39	5.65	4.64	6.00	4.90
Littleton	6.30	5.34	6.60	5.59	6.50	5.70
Lancaster	7.30	6.29	7.60	6.54	7.50	6.30

COMPARATIVE STATEMENT OF CONCORD AND BOSTON, CONCORD & MONTREAL RAILROAD TARIFF RATES IN FORCE IN 1873 AND 1890.

From	To	1873.					1890.					
		S	1	2	3	4	1	2	3	4	5	6
Boston	Manchester	22	17	15	11	....	14	11	11	8	8	8
Boston	Concord	26	21	18	14	....	18	17	14	10½	10	10
Concord	Nashua	19	14	12	9	....	13	11	9	7	5	5
Concord	Manchester	12	9	7	6	....	10	8	6	5	4	4
Concord	Portsmouth	22	17	15	10	....	18	15	14	10	8	8
Manchester	Portsmouth	19	14	12	7½	....	15	12	11	8	7	7
Portsmouth	Laconia	53	40	32	24½	...	28	23	18	15	12½	11
Portsmouth	Tilton	45	34	29	22½	....	28	23	18	15	12½	11
Littleton	Boston	82	68	56	48	39	40	34	27	21	19	17
Woodsville	Boston	79	66	55	45	37	38	33	26	20	18	14
Boston	Lisbon	81	68	56	48	39	39	33	26	21	19	15½
Boston	Lancaster	82	68	56	48	39	43	36	28	22	20	17½
Portsmouth	Pittsfield	32	26	21	18	..	21	19	17	14	12	12
Boston	Pittsfield	36	30	25	20	....	22	20	18	17	13	13

COAL RATES PER TON.

From	To	1873.		1890.	1883.	
		Cargo rate.	Carload rate.	Cargo and carload rate.	Cargo rate.	Carload rate.
Portsmouth	Manchester	$1.75	$2.00	$0.75	$1.20	$1.50
	Concord	2.25	.50	1.00	1.50	1.80
	Laconia	5.65	5.40	1.20	.....	4.00
	Littleton	8.05	8.30	1.60	.....	5.00
	Pittsfield	3.85	4.10	1.40	2.15	2.15
	Suncook	2.25	2.50	1.00	1.50	1.80

BOSTON & MAINE SYSTEM.

In the spring of 1887 the Boston & Maine began to sell mileage tickets, good to bearer, upon all its lines at two cents per mile. These were the first mileage tickets that were made good to the bearer in this State, and as they soon came into very general use by all who traveled much by rail, their effect was to greatly reduce passenger rates upon that system. In 1883 no mileage tickets were in use upon the Boston & Maine, the Eastern, the Great Falls & Conway, or any of the branches of these roads in New Hampshire, while upon the Northern, Worcester, Nashua & Rochester, and Manchester & Keene, they were sold for two and one half cents per mile, but were good only to the purchaser. Seven years ago local fares upon the Worcester, Nashua & Rochester ranged from three and one half to eight cents per mile, upon the Eastern from three to four cents, upon the Great Falls & Conway from three and one half to four cents, upon the Boston & Maine they were about three and one fourth cents, while upon the Northern they were three and one half cents, and upon the Manchester & Keene they were four cents. They are now uniformly three cents upon all these roads. Season tickets on the Eastern and Great Falls & Conway have been reduced from $4.80 to $3, upon the Northern from $4 to $3, and upon the Boston & Maine from $4.50 to $3. Through fares have not been greatly reduced but the consolidation of the roads, of which this system is composed, has resulted in making them nearly uniform, and as through fares are usually made up by adding locals together a change in one is, as a rule, in effect a change in the other.

The following table shows the changes in freight rates between the points specified upon the classes named, and is, perhaps, fairly illustrative of those upon the whole system, but it should be borne in mind that under the new classification which the passage of the interstate commerce law

and the action of the interstate commerce commission compelled our roads to adopt, many kinds of merchandise are classed much lower than they formerly were, and are, therefore, carried at much greater reduction than appears here:

TABLE SHOWING FREIGHT CHARGES UPON BOSTON & MAINE SYSTEM.

		First class.	Second class.	Third class.
Franklin to				
Bristol	1883	13	9	.....
	1890	11	10	8
Concord	1883	14	13	11
	1890	14	12	10
Manchester	1883	19	17	15
	1890	18	16	13
Nashua	1883	24	20	18
	1890	22	21	16
Laconia	1883	32	29	26
	1890	20	18	16
Plymouth	1883	40	34	29
	1890	24	21	19
Whitefield	1883	54	48	35
	1890	35	31	26
Dover	1883	35	30	27
	1890	28	23	18
Rochester	1883	37	31	28
	1890	28	23	18
Milton	1883	38	32	29
	1890	33	27	22
Lowell, Mass.	1883	27	23	21
	1890	25	31	16
Boston, Mass.	1883	30	27	23
	1890	28	23	18
Lynn, Mass.	1883	35	21	26
	1890	28	23	18
Newburyport, Mass.	1883	37	31	28
	1890	28	23	18
Biddeford, Me.	1883	45	38	31
	1890	33	27	22
Portland, Me.	1883	44	36	31
	1890	33	27	22

TABLE SHOWING FREIGHT CHARGES UPON BOSTON & MAINE SYSTEM. — *Continued.*

		First class.	Second class.	Third class.	Fourth class.
Keene to					
Marlborough	1883	7	6	5	4
	1890	5	5	4	3
Harrisville	1883	10	8	6	5
	1890	10	8	6	5
Hancock	1883	13	10	8	7
	1890	13	10	8	7
Greenfield	1883	16	12	10	8
	1890	15	12	10	8
Nashua	1883	23	19	17	14
	1890	18	16	14	12
Rochester	1883	42	34	30	24
	1890	26	22	18	14
Dover	1883	44	36	28	24
	1890	26	22	18	14
Lowell, Mass.	1883	23	19	17	14
	1890	20	18	15	11
Boston, Mass.	1883	29	24	19	15
	1890	26	22	18	14
Portland, Me.	1883	49	39	29	25
	1890	29	26	21	15
Lebanon to					
Franklin	1883	20	15	.....	.....
	1890	20	18	16	11
Bristol	1883	24	18	.....	.....
	1890	22	19	17	12
Concord	1883	27	22	20	15
	1890	23	20	18	13
Manchester	1883	30	26	24	18
	1890	29	25	21	15
Nashua	1883	36	29	27	20
	1890	31	27	23	17
Laconia	1883	45	38	35	25
	1890	29	26	22	16
Plymouth	1883	53	43	38	28
	1890	32	28	24	17
Whitefield	1883	67	57	50	40
	1890	39	34	29	21
Dover	1883	48	39	36	28
	1890	35	30	24	18
Rochester	1883	50	40	37	28
	1890	35	30	24	18
Milton	1883	51	41	38	30
	1890	40	34	27	19
Lowell, Mass.	1883	40	32	30	22
	1890	31	27	23	17
Boston, Mass.	1883	42	36	32	24
	1890	35	30	24	18
Lynn, Mass.	1883	47	40	35	27
	1890	35	30	24	18
Newburyport, Mass.	1883	50	40	37	29
	1890	35	30	24	18
Biddeford, Me.	1883	59	47	40	32
	1890	40	34	27	19
Portland, Me.	1883	57	45	40	32
	1890	40	34	27	19

In replying to an inquiry the general manager of the Boston & Maine says: "A very large reduction was made in freight rates when the Eastern was leased to the Boston & Maine in 1884, by making one tariff instead of two locals to all points on both roads, and the same is true of all other roads which have been leased to the Boston & Maine. Before the roads were united local rates were charged to and from all junction points, and in many cases through rates were nearly double what they are now. Since these roads were leased all points upon them have been opened for Western business, so that Western farm products can be shipped to points on this system at the same rates as to Boston." As will be noticed, the greatest advantage has accrued to the patrons of branch and mountain roads, by making the charges upon them when they have become parts of through lines uniform with those upon the main lines to which they have been attached. It cannot fairly be claimed that the great reductions here shown are wholly due to consolidation. The tendency everywhere has been toward lower freights and fares. Railroad managers have learned that the old doctrine, that business should be charged all it could bear, was not only an atrocious but a foolish one, and they have discarded it for a more liberal policy, which looks to a large traffic with small profits rather than a small patronage at exorbitant rates, and seeks to make it profitable for producers to locate upon their lines, and for the traveling public to journey over their tracks.

Other causes of concession are to be found in the contention known as the railroad war, during which both parties were compelled to bid for the good will and support of the public, and in the restrictive legislation of the war period which railroads were obliged to accept in order to reconcile the people to what they sought and at last obtained, — the privilege of consolidating, and also in the far-reaching competition between transcontinental lines of

which our roads have become parts. But with due allowance for all these forces, it may still be insisted that consolidation has promoted rather than prevented a reduction of rates upon New Hampshire roads until they are, all things considered, lower than in any other State in the Union. The average rate per mile paid by travelers upon railroads in this State is from 25 to 33 per cent less than that in either Maine or Vermont, two States upon which ours is bounded, which are very similar to ours as regards the cost of building and maintaining roads, and the character of the business they do. It is a fact that reduction in rates has always followed consolidation, even when by consolidation competition has been done away with, as in the case of the Boston & Maine and Eastern, and that whenever a New Hampshire road has been taken into a strong system, having desirable terminals and connections and a progressive management, its patrons have been the gainers by the change, and of this not only the Northern, Boston, Concord & Montreal, Great Falls & Conway, and Worcester & Nashua, but the Cheshire are illustrations.

We think it is clear that had our roads remained independent, as they were in 1873, they would not have made any such reductions in their charges as are stated above, because they could not. The Concord, because of its commanding position, was doing an immensely profitable business, and the Northern was strong because of fortunate investments in other roads, but with these exceptions they had made little money in New Hampshire, and all of them that were distinctively New Hampshire roads were weak financially, and had neither the capital nor credit necessary to put them in condition to do business economically. They were operated at great expense compared with through lines. They run from nowhere to nowhere, and what through business they had they were compelled to do at rates fixed by others. They were feeders for roads that reached to tide water, and were obliged to assess upon

their local patrons the profits which those roads extorted from them on all through traffic. They could not create business by reducing rates or increasing facilities, for they needed from day to day all their earnings to enable them to pay fixed charges. Their smallness and weakness, which were relied upon to prevent them from robbing and abusing the public, forced them to do just that in order to maintain an existence. Gains to the public have not been at the expense of stockholders, but have been balanced by a comparative reduction of expenses and a very large increase of business. The net earnings of all New Hampshire railroads were never before so large as this year, and the value of their stock was never before so great as now. During a period when railroad properties elsewhere have been constantly shrinking in value, New Hampshire railroad shares have as constantly appreciated. Thus far, then, neither stockholders nor the public have been injured by consolidation. On the contrary, all have been greatly profited by it, and as yet there is no apparent reason why the people of the State should regret the new departure which was proclaimed in the Colby act of 1883.

NEW ROADS.

The Whitefield & Jefferson road was originally built by the Brown Lumber Company and the Boston, Concord & Montreal Railroad, each paying half the expense, which was represented by 2,000 shares of stock of a par value of $100 each. After the consolidation of the Boston, Concord & Montreal and the Concord, the new corporation purchased the 1,000 shares in the Whitefield & Jefferson, paying therefor $100,000, and thus became the sole owner of the road, which it has this year extended several miles beyond Jefferson on the route to Berlin, to which point it is expected it will be constructed next year.

The Lake Shore, the Tilton & Belmont, and the Suncook Valley Extension, though chartered as independent

roads, were all designed to be branches of the Concord & Montreal, which furnished the money to build them and has since purchased all the stock, as follows: 2,752 shares of Lake Shore for $279,913; 472 shares of Tilton & Belmont for $48,550; 765 shares of Suncook Valley Extension for $76,577; making the total cost of these three branches $405,040.

The Tilton & Belmont, which connects the two villages for which it was named, was opened August 17, 1888, the Suncook Valley Extension from Pittsfield to Barnstead October 24, 1889, and the Lake Shore from Lake Village to Alton June 17, 1890. These openings were made the occasion of elaborate celebrations, which testified to the great joy of the people of Belknap county over the completion of roads for which they have argued, voted, and labored many years, and which are certain to greatly promote the prosperity of the sections through which they run. All these branches are well built, and the stations upon them are tasty and convenient. As parts of the Concord & Montreal system, they are operated at small expense, and contrary to expectations are not a tax upon the corporation that owns them. During the summer of 1889 the Portland & Ogdensburg, having been previously leased to the Maine Central, was extended from Fabyan's through Whitefield to Scott's, thus supplying the missing link in the Portland & Ogdensburg and giving the Maine Central a through line from Portland to Lake Champlain.

This link is also constructed in a most thorough manner, supplied with heavy steel rails and an abundance of ties, and has upon it two modern stations, the one at Whitefield being a model of beauty and comfort. On the first of May, 1890, the Maine Central added further to its New Hampshire possessions by leasing the Upper Coös, the lease containing a provision that that road should be extended to a junction with its Portland & Ogdensburg line in Carroll near Whitefield. The iron upon

this extension has been laid from Carroll to the Connecticut river in Lancaster, and the grading and masonry upon the remainder are nearly completed. The whole will be ready for business early in the spring.

The Bartlett & Albany, a lumber road, has been pushed some distance into the forest, but it has not been inspected by the Board and of its character we know little. The aggregate length of all these in New Hampshire is about 68 miles, which is the increase of the mileage of the State during the last two years. The Vermont division of the Upper Coös is 12¼ miles.

PERMANENT IMPROVEMENTS AND PHYSICAL CONDITION.

As has been said elsewhere, it was not to be expected that our short roads would be greatly improved while their owners were waiting to dispose of them, and this applies to those in the Cheshire system, upon which few permanent betterments have been made during the last two years, but the roadway, roadbed, and track of the Cheshire main line have been kept in excellent condition, and the Monadnock has not been permitted to grow worse. A lack of rolling stock upon this system was seriously felt by its patrons until it became a part of the Fitchburg.

The Connecticut River system is always kept up to a high standard. Iron bridges, well-ballasted roadbeds, sound ties, heavy rails, clean ditches, regulation fences, and ample sidings are its characteristics. Its stations are not attractive. The most important improvement since our last report is an iron lattice bridge across the Sugar river, two miles above Claremont Junction, which is 590 feet in length and 104 feet above the water. Its cost was $44,329, including $7,401 which was spent in repairing the masonry from which the old bridge was taken.

Important improvements upon the Boston & Maine system have waited until pressing demands in other States were responded to, and the consolidations and leases,

which have been pending, were perfected. Correspondence, which is published elsewhere in this volume, states the views of the Board as to some portions of this system, and the purposes of the corporation in regard to them. When a new station is built at Seabrook the Eastern in New Hampshire can be commended without reservation, and the Portsmouth & Dover, upon which one new station has been built this year, cannot reasonably be complained of. The main line of the Boston & Maine has been maintained in its usual sound and serviceable condition. The station at Exeter, which was burned, is being rebuilt upon the most approved plans, and the restaurant, which was formerly located there, has been moved to Newmarket Junction, where it is hoped a new union depot will be so constructed as to accommodate it. It is the purpose of the corporation to double-track both the Eastern and the Boston & Maine through New Hampshire, an improvement which is made necessary by an enormously increased and increasing traffic.

The track of the Worcester & Nashua is now all in steel and the roadbed is up to the requirements. The establishment of extensive brick yards upon this road has added largely to its heavy freight business, which it is now in good condition to carry.

Upon the Northern division the following permanent improvements were made during the year of 1889–90. The depot at Wolfeborough was overhauled, changed, and thoroughly repaired. New steam heating apparatus was put in, a new baggage room was built, and the grounds around it very nicely graded up and drained, making it a very neat and commodious station and equal to the wants of that beautiful and thriving village. Additions have been made at Wolfeborough Junction depot, new hot water heating apparatus has been put in, and other improvements made to accommodate the largely increased business at that point. A large amount of work has been

done at Alton Bay; 1,894 feet of track has been laid to connect this division with the track of the Lake Shore Railroad, and the yard has been fitted up so that the connections between these roads are convenient; 10,000 feet of additional side track has been laid, and a considerabe amount of grading done at various points.

The ordinary repairs have been thoroughly made; 38,467 ties, 45,441 feet of switch ties, and 674 tons of steel rails have been laid; some of the bridges have been strengthened; many of the depots have been painted, and the tracks and buildings have been generally improved.

When the Northern road and its branches were leased to the Boston & Maine, December 30, 1889, the lessee was prevented by the action of dissenting stockholders from taking formal possession of the leased property until October 1, 1890, and in the interval few but ordinary repairs were undertaken upon it, except at West Lebanon, where large outlays were made in erecting a new engine house and coal sheds, improving the yard, and rebuilding the bridge across the Connecticut. The ordinary repairs, however, include the strengthening of bridges, the extension of sidings, the improvement of grades, many renewals of culverts, platforms, and crossings, and the enlargement and reconstruction of stations, sheds, and other buildings.

The Concord road and its branches have been kept in excellent repair and improved by some costly betterments, including a new lattice bridge at Turkey Falls, Concord, and a new iron and steel bridge over the Souhegan river, costing about $13,000 each, yard extensions at Portsmouth, Nashua, Manchester, and Massabesic, new sidings at Hooksett (4,017 feet), at Merrimack (4,002 feet), and on the Acton branch (5,872 feet), an elegant new station at Massabesic, smaller ones at Shirley and Bayside, coal sheds at Nashua, and the rebuilding of the roadbed on many sections of the branch lines.

When the parties who now control the Concord & Mon-

treal Corporation secured possession of the Boston, Concord & Montreal and its branches in the spring of 1889, they at once adopted a comprehensive and thorough system of permanent improvements upon their newly acquired roads, which were cheaply built originally and badly out of repair, commencing with the roadbeds and tracks. From that time until June 30, 1890, as appears by the return of the Concord & Montreal Corporation, its expenditures for repairs of roadways and tracks were $178,144; of depots and buildings, $39,611; of bridges, $19,602; and of fences, $12,934; of which a large proportion represents outlays above Concord. In addition to this, $15,500 was paid for ties, $3,847 for a new lattice bridge at Haverhill, $2,770 for a new bank wall at Plymouth, and $1,351 for another at Pike's station. Improvements at Woodsville, which include a new station, cost $16,801; at Wentworth, $5,338; at Wing Road, $1,140; at Tilton, $5,086; and at Plymouth, $1,140. Fifty-six miles of 72-pound steel rails were laid upon the system at a cost of $30,893, and the roadbed has been ballasted and raised for fifteen miles north and twenty-five miles south of Woodsville, at a cost of $13,431, none of these items being included in the general expense account. No road in this State was ever before so much improved in two seasons as the old Boston, Concord & Montreal from Concord to Fabyan's has been, and while there is still need of heavy expenditures for stations, yards, sidings, bridges, and culverts upon the main line, and for nearly everything that constitutes a railroad upon the old branches, what has been done may be accepted as proof that as soon as can be reasonably expected the new managers of this road will put it in such condition that it will compare favorably with any other.

The Maine Central from the state line to Fabyan's has not been materially changed since our last report, and the same is true of the Grand Trunk, but we know of nothing

in the physical condition of either that calls for criticism.

The narrow gauge roads are nearly perfect.

GRADE CROSSINGS.

No grade crossings have been abolished since our last report, and the Board has reluctantly authorized the construction of many new ones over highways and existing railroads, because to have refused the permission asked would have prevented the building of much-needed branches in sparsely settled localities, where there is comparatively little business and where railroads can scarcely be expected to earn dividends upon their cost unless they are built at the smallest possible expense, and because in every instance the petitioners have brought the assent of the selectmen of the several towns in which such crossings are located. All grade crossings are a constant menace to life and property. Accidents upon them cannot be prevented by human care and caution, and how to get rid of them is one of the pressing problems of the time in all thickly settled localities, where the danger, trouble, and expense incident to their use are so great as to warrant the vast outlays necessary to their abolition. Even in our own State, if we were just beginning with our present knowledge to build our railroads, it would probably be deemed wise to absolutely prohibit crossings at grade ; but when we consider that it would probably cost as much to raise all our roads above or to sink them below the highways which they cross as it cost to build them originally, and that such an expenditure would render necessary a large increase in their fares and freights, or destroy their ability to pay their fixed charges, it is clear that we cannot reasonably expect to see many such crossings abolished upon our old roads or to prevent the construction of others upon roads that will be built hereafter. And with us the problem is, as to most grade crossings, how to reduce the danger to the minimum. Something can be done in this direction

by removing trees, shrubs, fences, embankments, and other obstructions of sight and sound which oftentimes prevent travelers upon highways from seeing or hearing an approaching train, and which hide them from the view of engineers and firemen until it is too late to avoid fatal accidents; in our opinion railroad corporations should not only be permitted to remove such obstacles, whether within their locations or not, by obtaining the permission of this Board, and paying the actual damage, if any, to land owners, but the Board should be empowered to compel them to do it. Blind crossings, upon which most accidents happen, can at least be done away with in this way without great expense or serious inconvenience to any one.

There are grade crossings in some of our cities and larger villages, as in Manchester, Nashua, Dover, Rochester, and Newport, which must eventually be abolished, not only to prevent accidents and save the roads the large expense of maintaining gates and flagmen, but to save the thousands of people who pass over them daily from the vexatious and costly delays which cannot be avoided at such points. It will cost a great deal to make these improvements, and the longer they are postponed the more they will cost, as the value of land in these places, which must be had in order to construct suitable underpasses or overpasses, is steadily and rapidly increasing. The trouble referred to has been greatly augmented in most of our large places by the location, upon both sides of grade crossings, of the railroad yards in which trains are made up, making it necessary to do a great deal of shifting over the streets and highways, but this we are glad to say is being done away with. In Manchester the Concord & Montreal, and in Nashua the Boston & Maine have made large outlays in order to move their yards from the much traveled streets, and when their plans at these places have been carried out, only made-up trains will threaten and annoy the public upon the principal thoroughfares, but even this

will only lessen the danger and damage upon the crossings in those cities.

In Massachusetts, where this subject has been long and carefully studied by experts, upon whose recommendation the Legislature of that State has acted, a statute has been passed, providing that, whenever in the judgment of a railway corporation or of a town or city the grades of an intersecting highway and railway should be separated, either party may apply to the superior court for the appointment of three disinterested persons as commissioners, who shall consider whether the public convenience requires the separation of the grades at that place, and if so, shall prescribe the nature and manner of the alterations to be made, shall fix the land damages, and apportion the expense, the statute, however, providing that 65 per cent of the cost shall be borne by the railroad company, and not more than 10 per cent by the town or city, the balance of 25 per cent or more being charged upon the commonwealth. The statute provides further that when by a change of grades a railroad is made to cross a highway by a bridge, the cost of maintaining the bridge shall be borne by the railroad company, and the highway beneath by the town or city; when the highway is made to cross above the railroad, the railway company shall maintain the abutments and framework of the bridge, and the city or town shall keep the roadway and approaches in repair.

Public sentiment, which is strongly in favor of the roads abolishing grade crossings at their own expense where it is practicable to abolish them at all, will not permit the passage of such a law in this State, but it is respectfully submitted that some enactment which will result in removing the worst of the grade crossings in our larger places is to be reasonably asked for in the near future.

ACCIDENTS.

From June 1, 1889, to December 1, 1890, a period of eighteen months, the Board investigated sixty-six fatal

accidents, in which sixty-eight lives were lost, an average of almost one fatality each week. Of the victims thirty-one were people not in railroad employ, but none of them were passengers who were rightfully upon the trains or railroad premises, and it is again possible to repeat the remarkable and gratifying statement that since 1873 no passenger has been killed, or very seriously injured, in a passenger car in New Hampshire, a record which is attributable mainly to something besides good luck, and which would seem to show that the danger incident to railway travel has in this State been reduced to a minimum. Of the thirty-one persons not railroad employés, who were killed during the time stated, at least twenty-two were wrongfully upon railroad premises, eighteen being trespassers upon the track and four engaged in stealing rides upon freight cars ; two others were children who rushed in front of horse cars in Nashua, one was an employé upon a milk car from which he was thrown, and five were killed upon crossings; three of these being persons over 70 years of age with greatly impaired senses. If it be admitted that these aged people were properly upon the crossings where they lost their lives, it still appears that if there had been no trespassing upon railroad tracks or cars, but five adults and two children not engaged in railroading would have been killed in the State in a year and a half. The list of fatalities among railroad employés numbers thirty-seven. Ten brakemen fell from trains, two were hit by overhead bridges, and one slipped in front of an engine. One conductor was hit by an awning and knocked under the wheels. Three engineers and one fireman were killed in collisions. One fireman jumped and two fell from locomotives. One superintendent and one section-man were drowned upon an engine under which a bridge gave way. Four were fatally injured while coupling cars, and one while trying to climb upon a car. Three section-men

were struck down while at work, and four others while going through railroad yards, as were two trainmen.

These facts correspond very closely with those stated in previous reports by this Board, and there is great uniformity in the ratio which accidents from any particular cause and to any particular class of people except passengers bear to the whole number in all the States, and of course in the whole country, so that it seems to be entirely fair to reason from them as to what is essential to a reduction in the fatalities among railroad men, and the prevention of serious accidents to those who are neither railroad employés nor passengers, but are, as a rule, wrongfully upon railroad premises when they are injured.

The last annual report of the interstate commerce commission furnishes these statistics, which are for the whole country:

RAILWAY ACCIDENTS FOR THE YEAR ENDING JUNE 30, 1889.

Kind of Accident.	Employés.		Passengers.		Other persons.		Total.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
Coupling and uncoupling cars	300	6,757	.....	.....	.....	.....	300	6,757
Falli'g from trains a'd engines	493	2,011	.....	.....	.....	.....	493	2,011
Overhead obstructions	65	296	.....	.....	.....	.....	65	296
Collisions	167	820	107	445	37	48	311	1,313
Derailments	125	655	28	389	29	69	182	1,113
Other train accidents	189	1,016	26	247	522	515	737	1,778
At highway crossings	24	45	3	16	410	634	437	695
At stations	70	699	26	295	328	472	424	1,466
Other causes	539	7,729	120	754	2,215	2,397	2,874	10,880
Total	1,972	20,028	310	2,146	3,541	4,135	5,823	26,309

The total number of railway employés in the United States is 704,743, which may be divided into trainmen,

switchmen, flagmen, and watchmen, and other employés. The number of employés in each class and the casualties in each class are given in the following statement :

CASUALTIES TO EMPLOYES ASSIGNED TO CLASSES NAMED.

Class of Employes.	Number.	Killed.	Injured.
Trainmen	138,323	1,179	11,301
Switchmen, flagmen, and watchmen	33,044	229	2,155
Other employés	517,136	536	6,360
Unclassified	16,240	28	214
Total	704,743	1,972	20,030

This shows 1 death for every 357 employés, and 1 injury for every 35 employés; or, making a similar statement for trainmen, that is to say, engineers, firemen, conductors, and other trainmen, railway accidents are the occasion of 1 death for every 117 employés, and of 1 injury for every 12 men employed. As 310 passengers were killed and 2,146 passengers injured during the fiscal year 1889, and the total number of passengers carried was 472,171,-346, it appears that 1 passenger in every 1,523,133 was killed, and 1 passenger in every 220,024 was injured.

The statistics here given emphasize the repeated arguments of the Board in favor of the prompt passage and rigid enforcement of laws to prevent people from using railroad tracks as footpaths and railroad yards and stations as loitering places and playgrounds, and they suggest further that a decent regard for the lives and limbs of trainmen dictates the speedy equipment of all freight cars with air brakes and whatever other safety appliances will relieve brakemen of the duty of darting between cars to couple them, and of running over their slippery tops to set and release brakes. It is to be said, however, that as nearly all our freight cars are employed in interstate commerce, and most of those used here are owned by foreign

corporations, their uniform equipment is a subject beyond the jurisdiction of this Board or of our State Legislature.

STREET RAILWAYS.

The street railways of this State were originally constructed by men who had in view the development of suburban lands, or other incidental advantages to themselves, neighbors, and friends, rather than the direct profits which might result from investments in such properties, and in the early history of these enterprises most of them were controlled by those who had too much other business to give them close attention, and managed in some cases by those who were entirely unfamiliar with the work they undertook. Under such conditions they were not, of course, handled in the best way, and they not only failed to command the patronage they might have had, but were allowed to rapidly deteriorate. But within the last three years all of them except the Laconia and Lake Village have passed into the hands of those who have purchased the stock, purposing to run them for business, and who have so reconstructed, repaired, and changed them for the better that they are practically new roads. The Concord road, which was at the beginning a horse railway and afterwards used motors upon its Penacook extension, was last summer changed to an electric road, and is now thoroughly equipped as such. It is still managed by the veteran superintendent, ex-Mayor Humphrey, but much of its stock has been purchased by outside capitalists. The Dover road, under the management of the Dow family, Mrs. Dow being president and her husband treasurer, was a failure. It neither served the public satisfactorily nor earned the dividends it paid, but the transfer of the Dow stock to Massachusetts capitalists gave them the franchise and what there was left of the equipment, and having obtained in August, 1889, a charter for a new electric street railway to Great Falls, they proceeded to con-

solidate the two, and then to dispose of the horses and cars and to remove the track of the old road, and finally to build in its place a new electric road, which was extended to Great Falls and opened for business August 8, 1890. It is about six miles in length, with nearly a mile of sidings, is standard gauge, well supplied with cars, car houses, and an electric plant and appliances, and since it was opened has done an average business of about $130 per day. It is first class in all respects, and could scarcely be improved. The Nashua road was secured about three years ago by George H. Knowles, of Boston, and his friends, and he has since extended and repaired it, added largely to its equipment, greatly improved the service upon it, and nearly doubled its patronage. The Manchester road was much the worse for wear, its tracks badly out of repair, its horses old and feeble, its cars dingy and dilapidated, and its service fitful and unsatisfactory, when Gen. Charles Williams purchased a controlling interest in its stock and began to impress upon it his liberal and progressive management, which proceeds upon the theory that a railroad should first spend and then earn its money. New tracks, new cars, and new horses have taken the place of old ones. The stables have been repaired. The McGregorville branch has, with the sanction of the commissioners, been moved from Bridge street to Main, and carried to a junction with the main line on Granite street, and the service is frequent and regular. A very large increase in the business is one of the fruits of this policy.

RAILROAD LAWS.

The Board has been favored with advance sheets of the report of the commission appointed to revise the statutes, so far as they relate to the railroad laws of the State, and has examined with care the proposed changes, which it cordially approves, because they make clear and explicit what

has been obscure and doubtful, and adapt the law to the changed conditions under which our railroads are operated. As the old statutes will probably soon be superseded by the new code prepared by the commission, they are omitted from this report, except those which were passed in 1889.

H. M. PUTNEY,
B. F. PRESCOTT,
JOHN M. MITCHELL,
Railroad Commissioners of New Hampshire.

CONCORD, December 1, 1890.

PART II.

OFFICIAL RECORDS.

ACCIDENT REPORTS.

DEATH OF GODFREY BOURDON.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, June, 1889.

June 4, 1889, at 11.12 A. M., Godfrey Bourdon, a man about fifty years of age, residing in Concord, was struck by train No. 72 over the Concord & Claremont Railroad, which left Concord for Claremont at 11.06 A. M., and killed, at a point about one mile northerly of Concord station. He was at the time of the accident in the act of crossing the track from the easterly to the westerly side. He resided a few rods westerly of the track, upon a street known as Fosterville. The evidence tended to show that he was at the time in poor health and afflicted with deafness and imperfect eyesight. A curve in the railroad immediately south of the point where Mr. Bourdon was struck obstructed the engineer's view until within a few feet of him. When struck, a portion of the train passed over one leg and arm and broke his head and inflicted other injuries from which immediate death resulted. At the point where he was attempting to cross the track there was no recognized crossing, although a path led to each side of the track. The evidence did not disclose the purpose for which the deceased was upon the east side of the track, nor was it shown whether or not he saw or heard the train until he was struck. Immediately on seeing him the engineer reversed steam and called for and applied brakes; but the distance was too short to enable him to stop the train before striking him, and it could not be stopped until it had nearly gone its length, — three cars beyond where it struck the deceased.

This death, which was entirely accidental, illustrates again the danger resulting from the use of the railroad tracks by persons at unguarded moments and in an unauthorized way, and further

emphasizes the necessity for some statutory prohibition and legal punishment for such use. This constant and increasing trespassing upon railroads and reckless disregard of personal safety should in some way be prohibited. This case is no exception to that rule within which it comes. So long as trespasses of this character are legalized by toleration, similar results are likely to follow.

JOHN M. MITCHELL,

For the Board.

DEATH OF BETSY H. SHAW.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, July, 1889.

Betsy H. Shaw, a widow lady eighty-one years of age, while walking over the highway crossing upon the 22d of June, near her home in Milford, was struck by the locomotive attached to the 5 o'clock P. M. express train from Boston, and thrown upon the ground with such violence as to cause her death. The accident was witnessed by several persons, whose testimony all points to a conclusion that Mrs. Shaw, who was quite deaf, did not notice the approaching train until it had nearly reached her, when she miscalculated its distance and, quickening her pace, attempted to cross in front of it, which she barely failed to do, as she was not run over by the locomotive but struck by its side after she had passed over the track. The train had slowed up considerably in order to make the stop at Milford station, a few rods above, and the crossing whistle had been blown just below, but the speed at that point was about twenty-five miles per hour, and owing to some obstructions the engineer did not see the lady until she was almost upon the track and it was too late to do anything to prevent the fatality. Even had this been otherwise it is not probable that her life would have been saved, for an engineer, acting under instruction to take an express train to a given point in the time allowed him, and in fact any engineer, acts upon the reasonable assumption that a person who is walking towards a crossing in broad daylight, in full view of the track, and within eighty rods of where a shrill whistle that can be heard for miles is being sounded, will take notice of approaching trains and keep out of danger until they pass. Any

other rule would bring nearly every train to several stops upon crossings, and render it impossible to afford the public the speedy transportation it expects and demands.

HENRY M. PUTNEY,
For the Board.

DEATH OF JOSEPH C. PORTER.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, July, 1889.

About 10.12 o'clock A. M., July 2, 1889, Joseph C. Porter, a brakeman on freight train No. 15, while on duty, was killed as the train was passing southerly near the upper switch at West Andover. He had been employed as brakeman only about a month. Train No. 15 had thirty-six cars, and Mr. Porter's position was upon the forward part from Canaan to West Andover. Shortly before reaching West Andover the conductor of the train, having discovered that there was a hot-box, motioned Porter to stop, and the train was stopped. After fixing the hot-box the train went on to East Andover, and there received orders from the Concord office before proceeding farther; and after getting orders the train went on to Penacook, where orders were given for Porter to be sent back on the next north-bound freight train. The conductor in searching for Porter to give him the order to return failed to find him, but found blood on the rear of the tender and on the draw-bar of the car next to the engine. His lantern was found upon the tender, but the light was extinguished. Porter was last seen upon the train as it stopped at West Andover. He was then seen upon the forward end of the car next to the engine and apparently in the act of passing from the car to the engine. His light suddenly disappeared from the top of the car. The night was dark and the space between the car and tender was quite wide, with no ladder on the end of the car, — the ladder upon this car being at its side.

From the best evidence attainable it appears to this Board that in his attempt to either step or jump from the car to the tender he missed his hold or footing and fell between the car and tender, was run over, and instantly killed. His face, head, and body were badly mangled and mutilated. The body was passed over by trains numbered 15, 12, and 17, and part of 14. The trainmen upon No. 14,

going north, found the body at West Andover at 3.45 o'clock A. M., at the point where Porter was apparently passing from the car to the engine when he fell and was killed. The remains were properly cared for and sent to Concord by the early express train, and there given in charge of an undertaker. Mr. Porter, as disclosed by the evidence, was about twenty-five or thirty years old, a man of good habits and a faithful employé.

JOHN M. MITCHELL,

For the Board.

DEATH OF DANIEL B. FAVOR.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, July, 1889.

On July 8, 1889, soon after 10 o'clock A. M., Daniel B. Favor, an employé of the Concord Railroad, while passing easterly over the tracks at the north end of the passenger station in Concord, was struck, run over, and instantly killed by a locomotive that was backing northerly upon the railroad track just easterly of the Montreal track. Immediately previous to the accident Mr. Favor had been upon Concord Main street, through which was passing at the time a large circus procession, and when injured he was returning from Main street to his place of work, which was easterly of the passenger station. At the time he was passing over the tracks there was a locomotive upon the Montreal track just south of the point he passed, which was moving south at the rate of two or three miles an hour, and its bell was ringing. The locomotive that hit him was moving at about the same rate of speed in the opposite direction, and the bell of this one was also ringing. As he crossed the Montreal track and approached and passed upon the track next easterly — the one on which he was killed, — his attention appeared to be directed in a northeasterly direction, towards the Free Bridge road, on which a portion of the circus procession was at the time passing, and he was apparently observing the procession and entirely unconscious of the presence and approach of the locomotive that inflicted the fatal injury. As he passed across the Montreal track and to and upon the track where he was killed, he was not observed, as shown by the evidence, by any one except the engineer upon the locomotive backing south : and this engineer did not discover Favor's ap-

parent unconsciousness of the presence of the locomotive moving north in season to give any alarm ; besides, the distance and the noise of the different bells and locomotives rendered an alarm by him practically useless. The engineer in charge of the locomotive which struck Mr. Favor was in the proper discharge of his duty, observing directions and signals given him by those in charge of the yard, and until some time after the engine struck Mr. Favor, and his body had been dragged or pushed north over one hundred feet, he was not conscious of Favor's presence in the train shed.

The accident, as it appears from the evidence, was due to Mr. Favor's unconsciousness of the movements and presence of the locomotive which struck him. His employment was marking cars. He was thirty-nine years old, and had been for many years a faithful, intelligent, and efficient employé of the Concord Railroad.

The large number of men whose lives have been sacrificed in the Concord Railroad yard within a comparatively short time should increase the care and caution of the men, and the corporation, if practicable, should provide some additional safeguards and preventives. The sad and serious consequences to the family, community, and corporation incident to the death of men by such accidents should stimulate all to extraordinary efforts to avoid such results.

JOHN M. MITCHELL,

For the Board.

DEATH OF JOHN HUGHES.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, July, 1889.

A fatal accident occurred upon the Lowell system, Southern division of the Boston & Maine Railroad, near Nashua station, on the first day of June, 1889, which resulted in the death of John Hughes, a colored person, who was a trespasser upon the railroad. The point where the accident occurred was near Little's station. The accident occurred at about 10 o'clock in the forenoon. Rufus T. King was the engineer on the passenger train which left Boston at 9 A. M. He testified that he was not more than one hundred feet from Hughes when his locomotive struck him. Hughes was supposed to be traveling from Nashua towards Lowell. A freight train running south was approaching the passenger train. Hughes was

standing upon the track of the passenger train, and appeared to be looking at the freight train and one of the brakemen upon it, and gave no attention to the bell and alarm signal of the passenger train. There was no opportunity to stop the train, which was running at the rate of about forty miles per hour, as the accident occurred upon a curve in the road. Mr. Hughes was a trespasser, and the only clue to his name was from a Testament that he had in his pocket which had his name in it.

From the evidence before the commission it did not appear that any one connected with the corporation was at fault, but that through carelessness he came to his death. As long as the railroad tracks are used as highways for tramps and other people fatal accidents like the above must constantly be expected. The whistle was blown, the train was stopped, the body was taken upon the train and carried to the Nashua depot, and every attention was shown that the case required. The testimony of the engineer and other trainmen was that on an average more than twenty tramps and trespassers are warned off the road daily between Boston and Nashua.

B. F. PRESCOTT,

For the Board.

DEATH OF WILLIE COLLIER.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, October, 1889.

On the 14th day of August, 1889, at about 2.30 o'clock in the afternoon, an accident occurred on the extension of the Portland & Ogdensburg Railroad, near Scott's station, which resulted in the death of Willie Collier, a lad about eleven years old. The testimony of Charles H. Hackett, conductor, Daniel P. Eaton, locomotive engineer, Joseph King, brakeman, and E. W. Reynolds, time-keeper, was taken, and all to the same effect. Young Collier lived near the road and for awhile was employed in carrying drinking-water to the men employed in the construction of the road. For certain causes he was discharged from that position. As soon as the rails were laid upon the road, and a construction train was put upon it for transporting men and material, young Collier used to get upon the train and ride from place to place. He was repeatedly warned off by those in

charge of the train. He gave but little attention to what was said to him and gave to men upon the train much anxiety and annoyance. The youth belonged in Waterbury, Connecticut, and was stopping with his parents near the new road. On the day of the fatal accident he got upon the train and was not seen. He stood upon the rear end of a platform car, and a box-car was in the rear of that. The train was getting some spikes and other material. When it started there was some jerk, as usual in the starting of trains. Collier fell from the car upon the track, and one pair of trucks of the box-car went over him, crushing his chest and breaking his arms. The train did not move more than ten to twelve feet before he was discovered. He died instantly. The engine was at once dispatched to Scott's for a coroner. The chairman of the board of selectmen of Dalton, who was a coroner, immediately repaired to the scene of the accident and took charge of the body. He did not deem an inquest necessary. All testified that he had repeatedly been warned and driven off from the train, but he did not heed the warnings, and this sad accident occurred in consequence of his persistency in getting upon this train. The Board cannot see where the employés of the railroad were responsible for this sad death.

B. F. PRESCOTT,

For the Board.

DEATH OF JOHN MORAN.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, October, 1889.

John Moran, who was lying upon the track of the Boston & Maine Railroad between Dover and Madbury, on August 14, 1889, at 5.50 P. M., was struck by passenger train No. 75, west bound, near Kittery bridge, about a mile and a half from Dover.

The evidence tended to show that the deceased was a laboring man, addicted to intemperance in the use of liquor, and that on the day of his death he had been seen in Dover in an intoxicated condition as late as 4 o'clock in the afternoon, when, in company with another man, who was not recognized by the person seeing them, he was walking upon the main track of the Boston & Maine Railroad in the direction of Madbury, and both were boisterous and intoxicated. As the engineer of the train which struck him first sighted

the object upon the track he did not recognize it as the body of a man, it appearing like an inanimate object, such as is frequently found upon the track, having been blown there by the wind, or like a dog which might be lying there; but as soon as he discovered that it was a man, either asleep or drunk, who was lying lengthwise of the track, he blew the whistle and reversed the engine, but he was then unable to stop the train before striking him.

When the engineer first saw the object, had he reversed his engine he might have stopped the train before reaching the place where the man was lying, but having no reason to believe that a man, at that time of day, was lying upon the track, he was justified in the course he pursued.

The deceased was a trespasser upon the track at the time of his death, and his own condition and carelessness are the primary causes of his unfortunate and fatal injuries.

JOHN M. MITCHELL,

For the Board.

DEATH OF MARTIN HYNES.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, October, 1889.

Martin Hynes, an employé in the engine-house of the Cheshire Railroad, was found dead in the railroad yard in Keene, on the 21st day of September, 1889, at about 7 o'clock in the evening. No one saw the accident. He is supposed to have been walking on the track, and been struck by the switch engine, as it was on a side track. The heel of his boot was caught between the rails at the triple switch. A short time before the accident he had left his home to go to the street. The accident happened at the end of the switch rail, and not at a frog. He was a lame man, fifty-two years of age, and was walking with a cane. Diligent inquiry was made and no one was found who saw the accident or could give any information how it occurred.

B. F. PRESCOTT,

For the Board.

DEATH OF CARLTON H. EVERETT.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, October, 1889.

An extra coal train from Portsmouth reached the Manchester yard about 9 o'clock Monday evening, September 23, 1889. The cars were left "on the hill" and the engine sent to the round-house in accordance with the usual custom in such cases. At that time William K. Forsaith, the night yardmaster, and Dorric La Flamme were on duty, and the shifting-engine Vulcan was at work upon the west side of the yard. Its crew consisted of Carlton H. Everett, an experienced and competent engineer, who had run in that place about two weeks; Earl H. Danforth, fireman; Fred Cota, who, as boss shifter, had the same relative position as a conductor on a passenger train; David Hill, a brakeman and coupler; and Michael T. Sullivan, a switchman. The coal train was seen when it arrived by most of these men, and a few minutes after, Forsaith called Everett's attention to the fact that the cars had been left on the Portsmouth track, and La Flamme told Cota the same thing. It is also testified by Cota that as the Vulcan was passing him, he, too, told Everett that the coal cars were there and warned him not to run into them. Mr. Danforth, however, who was on the engine with Everett, did not hear the warning and has no knowledge that he was ever informed that these cars were upon that track. After the Vulcan had passed up and down the yard eight or ten times, at about 10 o'clock, Cota ordered Everett to run up the hill, over the track on which the coal cars stood, and set the four or five cars to which the Vulcan was attached upon No. 1 siding. This Everett promptly attempted to do, and had nearly reached the coal cars when he discovered them in front of him. He shouted to his fireman to look out, but it was too late, and an instant afterwards the Vulcan had collided with a coal car, and Everett was fatally crushed between the back board of the cab and the tender, where he was caught while he was either attempting to leave the engine or was leaning out to get a better view of what was in front of him. He fell into the arms of a brakeman who stood upon the ground, and was tenderly cared for, but died in about forty minutes.

This accident belongs to a class in which somebody is seriously at fault. A collision is impossible when there is not carelessness or something worse. In this case Cota, the boss switchman, is the one man living who can be held responsible. Mr. Everett took his orders

from him, as it was his duty to do, and he died while trying to execute those orders. Cota's explanation is that he forgot all about the coal cars on the Portsmouth track, and he says he supposes that Everett also forgot about them.

It was incumbent upon Everett not to run his engine into danger, even when ordered to do so, and if he forgot what had been told him, he was equally at fault with Cota, but there is no proof before the Board that he was informed so that he understood that the coal cars were there and to remain there. As he had been at work but a fortnight in that place, and as this extra coal train was the first that had arrived at that hour during the time, he may not have known that the track on which it stood was the one over which Cota ordered him, or he may have assumed that Mr. Danforth, his fireman, who was handling the engine at the time the order was given and was familiar with the yard, would not allow him to run into trouble. But in any view of the case Cota was at fault. He knew that the coal train was on the Portsmouth track. It was his business to remember it and to keep the Vulcan from running into it, and this by his own admission he failed to do.

H. M. PUTNEY,
For the Board.

DEATH OF SALMON GLEASON.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, November, 1889.

Rev. Salmon Gleason was fatally injured upon the second crossing above Warren station on the Concord & Montreal Railroad, September 9, by being struck by the locomotive of the express train south. He was eighty-five years of age, was lame, and walked with a cane, but otherwise vigorous and in the possession of all his faculties. He resided in the vicinity, was familiar with the trains, and accustomed to cross the track very frequently. When injured he had been at work digging potatoes on his farm east of the track, and was passing from the field to his home on the other side. The train was twelve minutes late, and the engineer, John D. Swain, testifies was running at the usual speed, which the fireman, Walter E. Bickford, says is about fifteen miles per hour, as the brakes are usually set above that point to hold the train down the hill and

bring it to a stop at the station about fourteen hundred feet below. The crossing whistle was sounded at the proper place, and the bell was being rung when the accident occurred. Mr. Gleason was first seen by the fireman just as he stepped upon the track but a few feet in front of the engine, and by the engineer but a second before he was struck. Neither could then do anything to save him. The railroad, for several hundred feet above this crossing, is upon an embankment from one to twelve feet above the highway; it is on a grade of ninety feet to the mile, and upon a curve. There is a section-house in the angle formed by the intersection of the railroad and highway; and also considerable quantities of wood in piles. These obstruct the view between the railroad and highway for some distance; but from a point in the path over which Mr. Gleason passed, thirteen feet east of the rails, and at all points between that and the track, the view is entirely unobstructed. As he probably moved very slowly, being lame and weary, and as he passed over this distance and nearly over the track before he was hit, with the train in plain sight, it is reasonable to conclude that he saw it, miscalculated its distance from him or its speed, and supposed he had time to cross before it would reach him. It does not clearly appear why the fireman, who was upon the same side, failed to see him before; but had he seen him when he was twenty feet away, the train could not have been stopped before it reached the crossing, and it is not likely that any attempt would have been made to stop it, for, as has been said in previous reports by this Board, enginemen assume, and have a right to assume, that pedestrians in full view of the track will, when nearing a crossing, take notice of approaching trains and refrain from stepping in front of them. Any other rule of action would bring every train to a stop upon crossings so frequently that traveling upon railroads would be attended with such vexatious delays and failures to make connections that the public would rebel. With this view of the case, we can find no one, who is living, responsible for the fatality. The car-house referred to does not appear to have been a cause of this accident, but it is liable to prevent trainmen and drivers of spirited horses from averting collisions there, and in the judgment of the Board it should be removed to some other spot.

H. M. PUTNEY,

For the Board.

DEATH OF MICHAEL EDWARDS.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, October, 1889.

At 9 o'clock in the evening of October 28, Michael Edwards, a dissolute character, was at the city hall in Manchester intoxicated. Half an hour later, John C. Ray, superintendent of the State Industrial School, while looking for a boy who had run away from that institution, and Charles Emery, a night watchman, saw Edwards standing on the bunters between two freight cars in the Concord Railroad yard in Manchester, which was the last seen of him alive. At midnight his lifeless and mangled body was discovered upon the track about a mile below Goffe's Falls, where he had evidently fallen under the car wheels while attempting to steal a ride to Nashua upon the freight train which left Manchester at 9.35 P. M. This fatality is clearly due to the recklessness and intemperance of the victim, and no one else was in any way responsible for it.

H. M. PUTNEY,

For the Board.

DEATH OF JOSEPH MORAN.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, October, 1889.

The locomotive Conqueror left Fabyan's for the Wing Road at a little past 9 o'clock A. M., October 6. It was running "wild" and going after some freight cars. On nearing the Zealand crossing, the whistle was sounded and the bell rung as usual. When it reached a point a few rods below, it struck Joseph Moran, who was attempting to cross the track in front of it, injuring him so that he died soon after. The testimony before the Board is that of John H. Lawlor, the engineer, Edgar J. Houston, the fireman, Mary Gorman, Michael Stamp, and George N. Pike, who were eyewitnesses to the accident, and it is all to the effect that Mr. Moran left a house near by shortly before the engine reached the crossing, and moved toward the track ; that he saw it approaching and at once quickened his

pace to a run, as if to get over the rails in front of it, and was struck when he was nearly across. It was beyond the power of the engineer and fireman to prevent the fatality, and we judge it was due entirely to the recklessness of the victim.

H. M. PUTNEY,
For the Board.

DEATH OF FRED A. JOHNSON.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, October, 1889.

Fred A. Johnson, a faithful and efficient employé of the Boston & Maine Railroad, the conductor of freight train No. 240, on September 3, 1889, was fatally injured when he reached North Hampton depot, on the Eastern division. His train was on the way to Boston ; it was due in North Hampton at 10.08 o'clock, but reached there upwards of two hours late. There was in the train one car to be left at North Hampton, and two cars upon the side track at that place to be taken into the train. The switch to the side track upon which the car in the train was to be left, and that upon which stood the cars to be taken into the train, was located southerly of the depot, and to reach it the depot had to be passed upon the main line. When the train had reached a point about half a mile north of the depot, the conductor, Mr. Johnson, pulled the coupling-pin between the third and fourth, or fourth and fifth, cars from the engine, thus disconnecting the train and leaving attached to the engine three or four cars, which included the car to be left. After this disconnection of the train, the forward part moved rapidly towards the switch, and Mr. Johnson ascended one of the forward cars of the rear part and assumed the direction of this portion of the train. The conductor's apparent purpose in making this disconnection was to enable the forward part of the train to reach the switch, go upon the side track, leave one car and take on two others, and again reach the main line before, or by the time, the rear end of the train reached the switch, and thus make up some of the time already lost by the train. While those in charge of the forward part of the train were conducting it to accomplish this result, the rear part of the train was moving forward at a rate which, as it apparently seemed to Mr. Johnson, who was conducting it, was likely to reach the switch before the return of the other part to the main track ; and, to pre-

vent this result, he, while on one of the cars, facing the rear end of the train, motioned the rear brakeman for brakes, and in doing this leaned toward the depot side of the train, and as he reached the depot he was looking in the opposite direction, and, evidently not being aware of his near approach to the depot, he was struck on the back of his head by the end of an awning projecting from it and covering the platform in front of the depot. On being struck Mr. Johnson was thrown to the ground, his neck was broken, and other injuries resulted from which he died in a few hours. The lower part of the roof of this awning is as high, or a little higher, than an ordinary freight car, and extends towards the track as far as the side of the car, or, possibly, a little over the car. It was claimed by the corporation that Mr. Johnson, in disconnecting this train as he did, violated rule 14, which is as follows : "14. Neither conductors nor brakemen will be allowed to disconnect any part of their train while it is in motion, nor to make flying switches when possible to avoid it." This is a rule that has been in existence for a considerable time, and the evidence tended to show that it was frequently violated or disregarded by the trainmen ; but there was no evidence to warrant the conclusion that it was at this or any other time disregarded by the direction or with the knowledge or consent of the corporation or any of its officers or agents. The common disregard of this rule resulted, generally, from an honest desire on the part of the operatives to save or make up lost time. A strict observance of the rule by Mr. Johnson on this occasion would undoubtedly have prevented this accident ; and it may be asserted with equal accuracy that even the disregard of the rule, as on this occasion, would not have resulted in the accident in the form in which it occurred, had it not been for the awning by which Mr. Johnson was struck. In the opinion of the commission, the close proximity of this awning to passing cars on which men are obliged to operate renders it unsafe ; and this awning, and all others of similar construction which imperil the safety of trainmen, should be removed at the earliest practicable moment. The commission therefore recommends that the corporations operating the different railroads of the State reconstruct such awnings or projections of the depots upon their respective lines as in their present form endanger the safety of trainmen. Mr. Johnson was about fifty-five years of age, and had been an employé upon this road for several years. He was regarded by his fellow employés as a prudent and ordinarily careful man. After the accident he was properly and well cared for until his death, and all possible aid provided for him.

JOHN M. MITCHELL,
For the Board.

DEATH OF DANIEL A. DARRAH.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, December, 1889.

Daniel A. Darrah, a switchman in the Northern Railroad yard, at Concord, at 4.30 P. M., September 30, 1889, was struck by a train, felled to the ground, run over by several cars, and sustained injuries from which he died about 2 o'clock A. M., October 1.

There was a wound inflicted upon the head which involved nearly the whole scalp, the right arm was crushed from the wrist nearly to the shoulder, and there were several contusions about the shoulders, hips, and legs. At the point where the accident occurred, there were six different tracks that were parallel, or nearly so. There were upon those tracks at the time two switching and one freight train. The freight, which was a Concord train, was at the time either moving northerly or standing upon what is known as the "Concord track," located westerly of the track on which the accident occurred, and one of the switching-trains was also moving northerly upon a track westerly of that on which Mr. Darrah was injured, the other switching-train, the one which struck the deceased (engine 14), being northerly of the switch. Mr. Darrah set the switch to permit this train to go south upon what is known as the "east track," for the purpose of taking out some cars and also to clear the track for the other trains going north.

After setting the switch, Mr. Darrah motioned the engineer on engine 14 to back south upon the east track, and the engineer, Charles Lamprey, did so at the rate of two to four miles an hour. When the train began moving south, Mr. Darrah left the switch and walked southerly in advance of the train, but for what purpose did not distinctly appear ; it is presumed, however, that he did so to set another switch four or five cars' length south of the one already set.

He walked between the Concord and east tracks for a short distance after he left the switch, then, leaving the path between the tracks, he passed easterly and got upon the east track, the one on which the train run by engine 14 was backing, and he had walked upon this track but a short distance ahead of the train when he was struck and injured as above stated. As the train was approaching him, Martin McMahon and Reuben E. Clark, who observed his danger, called to Darrah and got his attention, but too late to save him. He seemed entirely unconscious of the near approach of the train, although he had just set the switch for the train to back in upon this

track. The engineer of this train did not see Mr. Darrah while he was walking from the switch to the place of the accident, and was notified of the accident by signals from others to stop his train, which he did as soon as possible. The evidence did not disclose how it happened that the deceased went upon this track upon which a train was backing and for which he had just set a switch ; and it is a matter of mere speculation whether he thought the train had not started to back down and, therefore, was not moving, or had miscalculated the rate it was coming and supposed it farther from him than it really was, or had forgotten about this train, or in his haste and inattention thought he was walking upon a different track from that on which the train was approaching.

In view of all the testimony and circumstances, especially considering the number of tracks at this point, it appears to us more probable that he mistook the track on which he was walking, and therefore was not aware of his exposure to danger.

Mr. Darrah was about twenty-eight years old. He was a faithful servant and a man of prudence and intelligence. The witnesses who appeared and testified before the commission were Martin McMahon, Reuben E. Clark, Patrick J. Donovan, Charles Lamprey, Jerry Shine, W. J. Brown, John Welch, and C. H. Fuller.

JOHN M. MITCHELL,

For the Board.

DEATH OF CLARENCE LITTLEFIELD.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, December, 1889.

An accident occurred on the Western division of the Boston & Maine Railroad, on the 30th day of October, 1889, which resulted in the instant death of Clarence Littlefield, a brakeman. The accident happened near the Powwow station, at 2.43 o'clock in the afternoon. Freight train No. 92, consisting of twenty-eight loaded cars, was going west towards Boston. At the Powwow station cars loaded with ice were to be taken. Littlefield was upon the locomotive, and when he saw the signal which indicated that loaded cars were to be taken into the train, he went across the tender and got upon a car loaded with lumber of irregular dimensions in order to give the proper signals to the other train hands. At this station, as was tes-

tified to by Stephen C. Sears, the engineer, there is a sharp grade; when a portion of the train had passed over the highest part of the grade, there was a slack between the cars, and Mr. Littlefield, standing upon imperfect footing, lost his balance and fell backward between the tender and the car. The engineer stopped the train as soon as possible, but thirteen cars had passed over the unfortunate man. Life was extinct when he was taken from under the train. Both of his feet were cut off and a portion of his head. The train broke apart at this station, but the testimony of the conductor and others was to the effect that the fatal accident was not due to this fact. The car on which the link broke belonged to the Pennsylvania road, and was inspected in Portland by the proper officers. It was left at its destination, Newton Junction. Mr. Littlefield was giving the proper signals for the handling of the train, as related in the testimony of the conductor and other brakemen. The slack or jerk in the train was felt by the other employés, and one other brakeman testified that he saw him fall. Mr. Littlefield was a faithful, sober man, punctual in the performance of all his duties, and highly esteemed by the officers of the corporation and his associates upon the train and road.

B. F. PRESCOTT,
For the Board.

DEATH OF ETTA DURGIN.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, January, 1890.

Etta Durgin, a girl about seventeen years of age, was instantly killed in the railroad yard in Dover, on the 13th day of December, 1889, at 5.50 o'clock in the afternoon. The circumstances of her death, as given by the witnesses, are as follows: Harry Glidden, a young man living in Dover, met Miss Durgin upon the street, and in company with her went upon the track of the Boston & Maine road and walked upon the track past the street which led to Etta's home. She had some talk with train hands who were on a train standing upon a side track. The couple shortly retraced their steps, as Glidden testified, and again passed the street leading to the home of the victim. Locomotive No. 266 had brought some cars and left them on a side track east of where the accident occurred, and was backing through the Dover yard to get water and

fuel and to be turned upon a turn-table. S. W. Twombly, the engineer, testified that he was running about six miles per hour. The couple walking upon the track did not discover the approach of the engine until it was almost upon them. Glidden was hit but not injured, while Miss Durgin was run over and instantly killed. Several witnesses testified that they had repeatedly seen her walking upon the tracks, and had cautioned her not to do so, to which admonitions she gave no heed, and frequently replied that she could look out for and take care of herself. In several instances trains had stopped and slacked speed for fear of running over her when she was upon the tracks. She was almost a daily trespasser. Her companion admitted that they had no right to be upon the track, and said they were engaged in conversation when the tender of the locomotive struck them. The bell of the locomotive was not ringing at this point in the yard, for the rules of the corporation do not require it, but the bell was properly rung while crossing the streets at either end of the station and while passing the station and platforms. This is another instance where a life was lost because the person killed persisted in being a trespasser upon a railroad, and particularly in a city where there were plenty of streets where she could go to and from her home in perfect safety. Until this practice of walking upon railroad tracks is prohibited, frequent deaths of persons killed by locomotives and cars must be recorded.

B. F. PRESCOTT,

For the Board.

COLLISION AT DERRY. — DEATH OF GEORGE TIBBETTS.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, January, 1890.

George E. Tibbetts, a young man in the employ of H. P. Hood & Sons, the milk contractors, was fatally injured by jumping from a car at Derry, December 30, 1889. It is the usual custom, during the winter months, to take a car, which Mr. Hood uses exclusively for the transportation of milk, from Pittsfield, where it is filled, over the Concord Railroad to Manchester, and then transfer it to the Boston & Maine road, by which it is hauled to Derry attached to the passenger train that leaves Manchester at 4.35 P. M. At Derry the car is side-tracked, and its contents removed to others in

which Mr. Hood carries his milk to Boston. In order to save time and trouble, a flying switch is made at Derry, the milk car in the rear of the passenger train being cut off about a quarter of a mile above the station by a brakeman who stands upon its platform and controls its speed with a break until it runs upon the Hood siding, where he brings it to a stop, leaves it, and goes to the passenger train to finish the trip to Boston. On the day of this accident the cut-off was made as usual by Frank E. Harvey, the brakeman, and the switchman in the yard threw the switch so as to set the car upon the siding; but when the brakeman attempted to check its speed, which was thirty or forty miles an hour when it was cut off, he found himself unable to do so because the brake did not hold. Mr. Tibbetts, who was upon the platform, went to his assistance and together they wound the brake as far as possible, but to no purpose, and as it became evident that the car would dash down the side track and into another which stood at the lower end, both men jumped. Mr. Harvey struck upon the ground and escaped with a broken arm. Mr. Tibbetts attempted to jump upon a wharf about four feet high beside the track, and the probability is that he struck upon it, and was thrown back in such a manner that he was caught and crushed between it and the car, receiving internal injuries which proved fatal.

The accident was clearly due to the failure of the brake upon the milk car to hold it, as the brakeman supposed, and had a right to suppose, it would. The car was a spare one which had that day been put upon the road to take the place of another sent to the shop for repairs. It is an old car, and when it was run regularly its brake was the subject of much adverse comment by trainmen, who regarded it as unreliable, but on that day it was examined at Manchester and appeared to be all right. Mr. Tibbetts, the victim, was an intelligent, active man, who had been in Mr. Hood's employ several months and was familiar with the running of this train, which he accompanied daily from Pittsfield. In jumping as he did to escape a collision which was clearly inevitable, he only acted the part of prudence, and neither he nor the brakeman can be held responsible for contributing in any way to the fatality. It remains, however, to be said that somebody is seriously at fault for establishing and continuing the custom of making a flying switch at this point when the train is running at the rate of thirty or forty miles an hour. Such a custom is recklessness, for which the saving of time and trouble is no excuse. It should be discontinued at once.

H. M. PUTNEY,

For the Board.

DEATH OF JOHN DIGNAN.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, January, 1890.

On the 7th day of December, 1889, at 6.45 o'clock P. M., John Dignan, an employé on the Southern division of the Boston & Maine Railroad, was fatally injured near the Concord Railroad station in Nashua. The circumstances connected with this case, as stated by the witnesses, are as follows: Detached locomotive Minotaur was at the round-house of the Nashua & Lowell road in Nashua, and was starting down the track towards the east. Dignan, who was employed in the yard, had finished his day's work and was that night going to his home in Manchester. He got upon the locomotive and talked with the engineer, William B. Tripp, and his brother, George P. Tripp, the fireman. They testified that he appeared all right and sober; that they knew him, as he worked upon their road. Just before the locomotive reached the Worcester, Nashua & Rochester Railroad, Dignan left his place inside the cab and stood upon the step on the fireman's side. The engine was running six or seven miles an hour. Neither the engineer nor the fireman, who was ringing the bell, saw him jump to the ground, but the fireman looked back over the tender and saw several persons running to the track. The locomotive was at once stopped and backed near where the men were gathered, and Dignan was found lying there with one leg badly crushed. Before he died he said that when he jumped he slipped and fell under the tender. He was at once removed to the Adams House near by, and surgeons summoned. He was put under the influence of ether and his leg was amputated near the body. He soon died. He jumped from the locomotive at the point determined upon by himself, and never asked the engineer to stop or slack the speed at which he was then running to let him off.

B. F. PRESCOTT,

For the Board.

COUPLING ACCIDENT AT GORHAM. — DEATH OF THOMAS J. KELLEY.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, January, 1890.

Thomas J. Kelley, a brakeman in the employ of the Grand Trunk Railway Company, was killed while coupling cars at Gorham, at about 12 o'clock M., November 21, 1889. Mr. Kelley was an intelligent, active young man, and while he had been regularly in the employ of the company but two months, and was making his fourth trip upon mixed train No. 17 when he was killed, he had previously had considerable experience as a spare brakeman or coupler in the yard at Lewiston, and was quite familiar with the duties and dangers of the position he occupied. The account of the accident by which he lost his life, as given by Willie F. Hodgkins, the conductor, Joseph Andrews, the engineer, and Edward Allen, a brakeman of the train, and corroborated by others, is as follows: It is the custom to take this train from Island Pond to Gorham with one locomotive, and from Gorham to Portland with another, and to do such shifting as the business requires. When Kelley was injured, the locomotive that was to go to Portland was making up the train. He had already made two couplings and was attempting to make a third between the van and a passenger car, which after the second coupling were about a car's length apart. He signaled the other brakeman, who in turn signaled the engineer to back the locomotive down so as to close this gap, and when this was done very slowly he stepped between the van and car just as they came together to put in the pin. For some reason he failed to drop the pin into the shackle as he intended, and this permitted the car and van to be crowded so close together that he was fatally crushed between them, and died soon after. The car was equipped with the Miller brake coupling, which was in good order, as were the draw-bar and link upon the van. Had he stepped upon the platform of one of the cars, as he should have done to make the coupling, he would not have been injured, and his death is clearly attributable to his failure to do this.

In taking the course he did, however, he followed the usual custom of brakemen, who, to save time and trouble, too often jeopardize their limbs and lives by taking a position between cars that are coming together in order to couple them. None of the evidence in our possession tends to the conclusion that the corporation or any of Mr. Kelley's fellow-employés was in any way at fault.

H. M. PUTNEY,
For the Board.

DEATH OF AMABLE COTE.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, January, 1890.

Amable Coté, a resident of Nashua, on the 2d day of January, 1890, was walking on the track of the Worcester, Nashua & Rochester division of the Boston & Maine Railroad, on his return from a quarry where he had been at work, situated below Nashua on that road. The passenger train from Worcester, due in Nashua at 3.55 P. M., was approaching the city. The engineer, Edwin Young, testified that he sounded a long whistle from one half to three fourths of a mile out of the city; that he saw Coté walking upon the track and began to give the warning signals, as he always does when people are traveling upon the track. People usually step off, and he had no reason to doubt that the man ahead of him would do as the others did. When he found he gave no heed to the whistles or the ringing of the bell, he reversed his engine and made every effort to stop the train, but he got so near the man it was impossible to accomplish his purpose. The locomotive struck and threw him some distance to one side. The train was running from thirty to thirty-five miles per hour. When the train stopped it was backed, and Coté was found to be dead. His body was put into the baggage car and carried to the Main-street station in Nashua, and from there he was conveyed to his home. Mr. William Holland, the fireman, corroborated the testimony of the engineer. Coté was very deaf, was walking alone, and about one fourth mile from highway crossing. Many others are trespassers at this same point, and the engineer testified that it is one of the worst places upon the road for people to travel, and it is impossible to tell when they are going to step out of danger, as they wait until the train almost reaches them.

B. F. PRESCOTT,

For the Board.

DEATH OF HENRY T. FIELD.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, January, 1890.

Henry T. Field, head brakeman on freight train No. 17, on the Cheshire Railroad, was killed on the 24th of December, 1889, at about 1 o'clock in the morning. This train left Bellows Falls at

5.40 P. M., December 23. The engineer, Ethan A. Crosby, of Walpole, testified that the last he saw of Field was just after the train left Marlborough; at the Summit in Fitzwilliam he saw the light of Field's lantern reflected upon his cab window. When he reached Fitzwilliam, Field was missing. He with others went back to the Summit and there found him lying across the rails dead and badly mutilated. Fred A. Bissell, of Bellows Falls, the fireman, testified that the last time he saw him was at the Summit; that he was climbing out of the second car from the front on to the roof. He then walked to the head car and to the head brake, which he took hold of. In his walk to the head car he moved very slowly and carefully, with one foot on the running-board and the other on the roof, as the top of the car was very frosty and slippery. Bissell looked again but failed to see him, and at once got upon the head car and discovered Field's lantern about midway of the car roof. The head brake was partly set up. The fireman assisted in letting the train down the grade to Fitzwilliam, and then went back on the locomotive to find Field. The conductor, Charles Taggart, of Bellows Falls, testified that he last saw him at Keene, and that he was in the saloon while the train was running from Troy to Fitzwilliam. He noticed no unusual movement in the train that evening. All testified that the cars were very slippery, and the probabilities are that Mr. Field slipped while at the brake and fell between the cars, but no one saw him fall.

B. F. PRESCOTT,

For the Board.

HEAD COLLISION ON CHESHIRE RAILROAD. — DEATH OF SIDNEY SLATE AND CHARLES W. GIBSON.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, January, 1890.

January 6, 1890, at 9.30 A. M., local freight train No. 9, from Bellows Falls, east bound, collided with a "wild train" from Keene, west bound, about half a mile west of a turnout known as "Summit," which is about six and one half miles east of Westmoreland, and resulted in the fatal injury of Sidney Slate and Charles W. Gibson, engineer and fireman of train No. 9.

Train No. 9, when it left Bellows Falls, had orders not to pass Westmoreland without orders in reference to its running east of Westmoreland. Wild train and train No. 11, which followed it west from Keene, were ordered at Keene to meet train No. 9 at Tenth Section, a turnout about two miles west of Summit, the place of collision. From Keene the train-dispatcher sent to Westmoreland, for the conductor and engineer of train No. 9, the following order: "To conductor and engineer No. 9: No. 9 must meet 'wild train,' Stiles, conductor, at Tenth Section." The telegraph operator at Westmoreland, Miss Harot L. Cook, received this order and duly signified in return, to the dispatcher's office in Keene, that she had received and understood it. In transcribing this order for the conductor and engineer of train No. 9, Miss Cook accidently and erroneously substituted the word "Summit" for the words "Tenth Section," and with this substitution delivered the order to the conductor and engineer. With this order thus erroneously worded, and relying upon its accuracy, the conductor and engineer of No. 9 left Westmoreland and passed the Tenth Section, and when on a curve, about half a mile west of Summit turnout, collided with the wild train and killed the engineer and fireman of train No. 9. Both trains were badly wrecked. The rate of speed of each train, so far as can be ascertained, was that permitted by the rules.

The deceased engineer and fireman were at their posts of duty when killed, standing at the foot-board and there held by the tender of the engine. The engineer was leaning upon his lever; one foot, his right one, seemed to be on the running-board, apparently for the purpose of bracing himself as he worked the lever. The fireman was wedged by coal and other things that surrounded him. The dead bodies of the engineer and fireman were taken in charge and cared for by Coroner Clark F. Rowell and suitable undertakers. Engineer Slate was about forty years of age and had been in the company's employ about ten years as fireman; he had served as engineer but a short time. Fireman Gibson had been in the company's employ but a short time. Both men, so far as disclosed by the evidence, were prudent, efficient employés, and died complying with what they honestly believed, and had a right to believe, were the orders of their employer.

This unfortunate accident, which resulted in the death of two men, is due to an accidental, unconscious error made by the telegraph operator at Westmoreland, Miss Harot L. Cook, a lady who has occupied this responsible position for fifteen years. As disclosed by the evidence, this is Miss Cook's first mistake in transcribing the dispatcher's orders. The two turnouts, Tenth Section

and Summit, being comparatively near together, and the one used nearly if not quite as much as the other, and therefore the name of the one transcribed by Miss Cook as often, or nearly so, as the other, doubtless had much to do with this unconscious error which, unfortunately, resulted so seriously.

JOHN M. MITCHELL,

For the Board.

DEATH OF JAMES LEAHY.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, January, 1890.

In the Concord Railroad yard, at 5.20 P. M., January 7, 1890, James Leahy, an aged employé who had long and faithfully served the Concord Railroad Corporation, was run over and instantly killed by the engine Atlas, which was running backward upon the most easterly track in the yard and destined for the engine-house. The engine had no cars attached; Engineer Joseph F. Cook and Fireman George B. Moulton were in charge of it. No one witnessed this unfortunate and fatal injury. When found, a few moments after the engine passed over him, life was extinct. The fireman testified that the bell was ringing when the engine approached and passed the point where Mr. Leahy was killed; the engineer and fireman testified that the engine was running very slowly at the time. The evidence does not disclose any negligence or carelessness on the part of either engineer or fireman. Engine Atlas had, immediately previous to the accident, drawn into the yard from the south freight train No. 20, and, having distributed the different sections of the train in the proper places in the yard, was being run backwards into the engine-house. Mr. Leahy, immediately previous to the accident, left the shops of the Concord Railroad in his working-clothes, but for what purpose, or where he was going at the time, did not appear. While engine Atlas was backing upon this track, or easterly track, the 5.15 express passenger train south, being a few minutes late, was drawing out of the depot a few tracks westerly of it.

It seems probable, upon the evidence, or rather in the absence of evidence, that Mr. Leahy either did not hear the bell of the Atlas, or his attention was distracted and he was confused by the bell of the express train going south, or, if conscious of the presence and ap-

proach of the Atlas, he may have erroneously supposed that it was backing upon the track next west of that on which he was walking when struck, as engines frequently approach the engine-house by that track.

This accident emphasizes anew the necessity of the corporation providing, if possible, some method of avoiding such accidents, and the great danger incident to the frequent, common, and necessary use of the yard by shop and yard employés, in passing to and from their work; and the necessity on the part of the employés, in the meantime, of exercising care and vigilance corresponding to the exposure and danger to which they are subjected while traveling in the yard, where so many trains are almost constantly passing in different directions.

The witnesses who testified before the commission were W. S. Davis, Jacob Jones, C. F. Chase, Martin Coughlin, Joseph F. Cook, and George B. Moulton.

JOHN M. MITCHELL,
For the Board.

DEATH OF DAVID HIGGINS.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, February, 1890.

David Higgins, a brakeman on the Cheshire Railroad, was killed near the Westmoreland station, on the 21st day of January, 1890, at 4 o'clock in the afternoon. Walter C. Fassett, engineer of locomotive F. H. Kingsbury, testified that he was running an extra freight, No. 13, with twenty-four loaded cars; that about one mile west of Westmoreland station Higgins came back with a flag and said his train was stalled, and asked him to come up and help push them through the ledge. This train was about forty rods in the rear of the stalled train. Higgins then got upon the locomotive, and rode to within two or three cars' length of the train, when he stepped off, and went between the front of the locomotive and the caboose at the rear end of his train, for the purpose of coupling the two together. The locomotive moved very slowly. Mr. Fassett said that he perceived the coupling was not made, as he saw the end of the saloon car rising up a little. The steam was then reversed, and the locomotive backed ten or fifteen feet, as it was a heavy grade at this point. Mr. Fassett got off his locomotive, and

went forward and found Mr. Higgins dead in the middle of the track, where he had been caught between the front of the engine and the saloon car. The engineer could not tell whether he got upon the pilot or whether he got hold of the shackle-iron. The engine moved ahead about a foot after the steam was reversed.

Walter E. Judd, the fireman on the F. H. Kingsbury, testified that he saw Mr. Higgins go in front of the locomotive to couple it into saloon car of train No. 13, and saw him stoop as if to pick up the shackling-rod, but saw nothing after that. He also corroborated the statements of Mr. Fassett.

George W. Tobias, conductor on the train to which Mr. Higgins belonged, testified that his train got stalled, and that he sent Higgins back with a flag to stop extra train No. 13 and then went ahead to see what caused the engine on his train to stop. He did not see Mr. Higgins after that. He testified that the extra came up very slowly, and when it touched the saloon car the contact was hardly perceptible.

As no one saw Mr. Higgins in the act of coupling the trains together, the exact cause of the fatal accident cannot be given; but it must be owing to a misstep or wrong move made by himself.

B. F. PRESCOTT,

For the Board.

DEATH OF ARTHUR BERGEON.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, February, 1890.

The body of Arthur Bergeon, a Frenchman, was found at 3.30 o'clock in the afternoon of January 24, under a freight train, on the Cheshire Railroad, in the east yard, in Keene. Bergeon was an employé in the Cheshire chair-shop, had left his work, and was going to his home, which was about one half mile north of the depot. As no one saw the accident, the supposition is that he was attempting to climb upon the train to ride home, and while doing so fell under the car. The wheel that ran over him left the iron and went on to the ground, where the body was found. Mr. Bergeon was a trespasser upon the road, and no one is responsible for the accident but himself.

B. F. PRESCOTT,

For the Board.

DEATH OF MRS. CHARLES E. CRAM.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, March, 1890.

Investigation at Dover, March 8, 1890.

Witnesses : Samuel L. Hersey, Albert E. Stevens, E. E. Lull, Charles Nason, and Barnard F. Fox, of Somersworth, and Frank M. Warren, of Rollinsford.

Mrs. Charles E. Cram, of Great Falls, was killed upon the track of the Rollinsford branch of the Boston & Maine Railroad, by being struck by the locomotive attached to the passenger train going south from Great Falls, at 10.20 A. M., February 26. Mrs. Cram, who was an estimable lady, had been in ill-health for some time, and on the morning of the accident her husband noticed that she was unusually depressed, and left her to go to his daily business with some apprehensions in regard to her. On returning at noon he found the house deserted, and from the evidence produced during our investigation, it appears that his wife, although the walking was very poor, and there was a team in the stable which she could have used, wandered from home on foot, and started to walk to the house of a friend in Salmon Falls, three miles away. She proceeded down the highway until she reached Crockett's crossing, when she took the track and walked upon the ties some distance. She then retraced her steps, and was returning in the direction of the crossing, when she was seen by the enginemen walking upon the ties outside the track, about one fourth of a mile away. The whistle had been blown just above the crossing, and the bell was being rung. As she was walking towards the train and outside the track, the engineer assumed that she was aware of his approach and in no danger; but just before the engine reached her she was observed to turn and step or throw herself directly in front of it. She lived but a few hours and was entirely unconscious until her death. Whether she deliberately committed suicide, or was startled from a dazed condition by the engine and involuntarily stepped over the rail, cannot be known; but in either case no blame attaches to any of the trainmen, who were discharging their duty at the time.

H. M. PUTNEY,

For the Board.

DEATH OF DELBERT BLY.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, March, 1890.

Investigation at Nashua, March 25, 1890.

Counsel: For the railroad, George B. French; for the parents of the victim, Cutter & Son.

Witnesses: George E. Jackson, Dr. H. W. Tolles, Henry McCaffrey, C. H. Neal, Mrs. John Baldwin, Mrs. C. S. Masseck, Mrs. Natt Marshall, G. E. Mudgett, Mrs. D. Gage.

At about 2 o'clock P. M., March 17, Delbert Bly, a lad about twelve years of age, was at play with some schoolmates upon the sidewalk upon the opposite side of the street from the Main-street schoolhouse, in Nashua. At the same time, car No. 7, of the Nashua street railway, having left the southern terminus of the road as usual, at 1.45, was running up the street in charge of George E. Jackson, its regular driver, at a speed of four or five miles per hour. Just as the car reached a point opposite the schoolhouse, and near a street crossing which runs to the schoolhouse yard, young Bly, who was apparently running away from his companions, who were sportively trying to catch him, dashed from the sidewalk, passed towards the schoolhouse a few feet upon the crossing, then left it and ran diagonally to the railway track, at a point a few feet north of its intersection with the crossing. He reached this point at the same instant the team attached to the car did, and ran with great violence against the shoulder of the off horse. He then stumbled and fell directly across the rail in such a position that the car wheels passed over him and crushed him to death. Mr. Jackson, who has worked for the road a year and has an excellent reputation as a competent and careful driver, testifies that he first saw the Bly boy as he left the sidewalk and rushed towards the track; that he instantly shouted to him, and twisted the brake upon the car so hard that the rod was considerably bent, but was powerless to stop the car until it had passed over the victim and run about ten feet. He thinks the boy was looking back over his shoulder towards his pursuing companions when he ran into the team, and also that he tripped just before reaching the track, and fell instead of being thrown upon it by the collision. His testimony as to the speed of the car, his efforts to stop it, and the manner in which the accident happened, are corroborated by

several reputable ladies and gentlemen who were eyewitnesses, and was not in any way questioned by any one at the hearing. We find no reason to suppose that the driver was not exercising due vigilance and such caution as may reasonably be demanded of men in his position, or that the railway corporation or any of its agents can justly be charged with responsibility for this fatality.

H. M. PUTNEY,

For the Board.

DEATH OF GEORGE E. COOKE.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, March, 1890.

On the 2d day of March, 1890, George E. Cooke, an employé of the Boston & Maine Railroad, was killed on the Eastern division of said road, at Seabrook. The circumstances in connection with his death, as gathered from the testimony, are as follows: A freight train going towards Boston set off on a side track at Seabrook, at a little past 8 o'clock in the evening, to allow passenger train No. 71, from Boston to Portland, to pass. Harry Fernald, the conductor of the freight train, and Mr. George E. Cooke, a brakeman, went into the station at Seabrook, where Mr. E. L. Dow, the station agent and telegraph operator, was, to make inquiries of him about certain articles of freight. In a few minutes the whistle of the approaching passenger train was heard, and all three took their lanterns and left the office. Mr. Dow went out to flag the passenger train. Mr. Cooke, as is supposed, attempted to cross the main track to reach his own train on the siding east of the main track and south of the highway. It was snowing fast and the wind was blowing strongly from the northeast. Mr. Cooke slipped, as it was icy, on the main track, and had not time to regain his footing and get out of the way of the approaching train, which was nearer than he had probably calculated, and running at a high rate of speed. He was struck by the locomotive, and after the train had passed was found between the platform of the station and the rail. He was instantly killed, his head being badly crushed, beside other serious injuries. The engineer, John Page, was not aware of the accident until he reached Portsmouth. Information was at once sent to Mr. Daniel Sanborn, superintendent

of that division of the road. He ordered everything to be done which possibly could be. A coroner was present — Mr. Jeremiah Chase, of Seabrook, — but no inquest was held, as it was perfectly clear how the death occurred. The body was placed on the freight train and conveyed to Newburyport, where it was taken in charge by an undertaker and properly cared for. Cooke's lantern was found near by where he was killed, in the snow, and was not extinguished. Some other articles were also found which belonged to him.

Mr. Cooke was an esteemed employé of the road, and faithful in the performance of his duties. This accident, no doubt, was the result of carelessness on the part of Mr. Cooke in making the attempt to cross the track before the passenger train had passed, as there was no particular necessity for his doing so. His own train was only a few rods distant from him, and all had ample time to reach it before it started southward towards Boston. It would seem, from all the testimony, that this accident happened through the imprudence of Mr. Cooke, as he was not at the time acting under the order of any of his superiors, and ought not to have taken an unnecessary risk.

B. F. PRESCOTT,
For the Board.

DEATH OF IRA BONNER.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, March, 1890.

At West Lebanon, March 17, 1890, at 5.55 o'clock P. M., Ira Bonner, a boy thirteen years of age, while attempting to get on to freight train No. 6, fell under it and was run over by six wheels, which crushed his legs and inflicted other injuries from which he died in six hours thereafter. He was not observed by the trainmen until after being run over. The train at the time was approaching the station at a slow rate, having commenced to slack. The deceased, at the time of the accident, was on his way to the railroad round-house, at West Lebanon, with his father's supper, his father being an employé of the corporation. He was accompanied to the round-house by three other boys, two of whom were about his age and another about sixteen.

When the train's approach was signaled by the whistle, the boys being then on the highway running parallel with the railroad, the deceased left the highway, followed by the others, and said he was going to get upon the train, and did attempt it, as before stated, although requested not to do so, and admonished of the danger by George Raynor, the boy of sixteen.

The witnesses who appeared before the Board were Solon M. Betton, the conductor, W. F. Auld, the brakeman, Joseph Bonner, the father, George Raynor and Frank Chambers, two of the three boys accompanying the deceased at the time of the accident.

JOHN M. MITCHELL,

For the Board.

DEATH OF LEONARD H. CROUCH.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, May, 1890.

Investigation at Woodsville, May 5.

Witnesses: H. B Mann, C. W. McIntyre, C. M. Nourse, George F. Gonyer, William P. Balch, James T. Gordon.

Counsel: For the Crouch heirs, Charles Griswold, administrator; for the railroad, S. B. Page and J. W. Fellows.

The Kilkenny Railroad is a surface road, built and used exclusively for the purpose of hauling timber from the forests of Kilkenny to Lancaster, a distance of ten miles. It was cheaply constructed and the grades upon it are heavy, but it is in fair condition for the business for which it is designed. When the logging season opened in the fall of 1890, H. B. Mann was put in charge of the trains upon it, and Leonard H. Crouch, one of the most capable and trusted engineers upon the Concord & Montreal system, was selected to run the locomotive, — a position which it was understood required a man of excellent judgment and nerve.

The locomotive given him was the Mt. Washington, an eight-wheeled machine weighing 75,000 pounds, which is used in summer to take passengers between Fabyan's and the base of Mt. Washington, and with this he was accustomed to haul daily from the mountain logging trains consisting of from twelve to fourteen lengths of timber, each resting upon two sets of trucks, to which were

attached brakes that were set by hand, with wrenches, before the load started, and were relied upon to hold the train as it passed down the grades. There was no regular running time for these trains, but they usually made the distance between Kilkenny and Lancaster, ten miles, in about an hour, their speed over portions of the route being about fifteen miles per hour. In the latter part of January, the Mt. Washington blew out a cylinder head, and the Triton, a four-wheeled shifter built at the Blood Locomotive Works about a year before, was sent from the Concord yard to take her place. The weight of this engine is 61,450 pounds. Mr. Crouch met her at Woodsville, took her to Lancaster, and on the last day of January went with her to Kilkenny after the usual load of logs. The making up of his load was completed at Button's Landing, when it consisted of the Triton in charge of Engineer Crouch, its tender, twelve lengths of logs containing about 60,000 feet, which rested upon flat cars and trucks, and a saloon car.

Mr. Mann, the superintendent, was with the train, and it carried as fireman William F. Balch, C. W. McIntyre as conductor, and C. M. Nourse and George P. Gonyer as brakemen. Before leaving Button's Landing the brakes upon the rear trucks were firmly set, as was the custom, and Mann, McIntyre, Gonyer, and Nourse took their positions in the saloon car, while the others were upon the locomotive. The train passed down the hill at a speed of about twelve or fifteen miles an hour, until it reached the sag between Button's Landing and "The Orchard." Here the pin that coupled the trucks between the fourth and fifth lengths of logs broke and the train parted, the engine, tender, and four lengths of logs passing on through "The Orchard" and pitching over the hill, when their speed rapidly increased until it was twenty-five or thirty miles an hour. About a quarter of a mile below the top of the hill, the locomotive struck a curve, left the iron, and was instantly wrecked, the tender and logs attached to it being piled upon it. Mr. Crouch was soon after taken from the wreck dead, and his fireman, Mr. Balch, was rescued badly hurt but subsequently recovered. The eight lengths of logs in the rear section of the train were held by the brakes, so that they passed through the sag and over the Orchard hill at a very slow rate, and when they reached and were stopped by the wreck they were not running more than three or four miles an hour. None of the men in the saloon car were injured.

It is difficult to fix the responsibility for this accident. The direct cause was the breaking of the coupling-pin, which was free from flaws and apparently strong. No inspection would have disclosed its liability to break and there is no reason to believe that the sub-

stitution of another for it would have prevented the train from parting. None of the trainmen were at fault. They were all at their posts and attentive to their duties, and they all did what their experience during the winter and previously had taught them might be done safely. It has been suggested that when Mr. Crouch became aware that the train had broken apart, and that his section of it was running down the hill very rapidly, he should have applied the air brake attached to the engine and tender (which he did not do) and thereby reduced its speed so much that the locomotive would not have left the track ; but the testimony is that the brakemen told him after leaving Button's Landing that the brake when applied had the effect to lift the tender from the iron, and warned him against using it ; and it is to be considered that he knew the rear end of the train was following him and that it was necessary to keep out of its way ; and, further, that he was a prudent, competent, cool man, of whom it is to be assumed, until clearly proved to the contrary, that he did what was proper under the circumstances. There was no defect in the road where the train parted or where the accident occurred. There is general concurrence of testimony to the effect that neither the length of the train nor the speed at which it was run made it unsafe; indeed, the opinion of experienced men as given at the investigation is, that a logging train of twelve or thirteen lengths is more easily managed upon a crooked road, like the Kilkenny, than a shorter one, because some sections of it are nearly all the time passing over curves which serve to hold the wheels and check its speed, and that fifteen miles an hour, when passing down towards a sag from which there is a sharp rise, is quite as safe as a slower rate, and is perhaps necessary in order to gain momentum enough to carry it over the rise.

One question remains. Was the Triton a suitable substitute for the Mt. Washington when the latter was disabled ? She was nearly as heavy and as powerful, and in perfect order. The difference in the two machines when considered with reference to the work upon the Kilkenny was mainly that the Washington had eight wheels, six drivers, and two leading trucks, while the Triton had but four drivers and no leading trucks, and it is the opinion of most of the trainmen that a locomotive of the Washington pattern is more likely to keep the track when passing over curves at a high rate of speed than one without leading trucks, like the Triton, and that the probabilities are that the Washington would not have been derailed under the same circumstances as the Triton was. Mr. Gordon, however, the master mechanic of the Concord & Montreal road, who selected the Triton to replace the Washington, with special

reference to the Kilkenny business, contends that she was as well or better adapted to such work than a machine with more wheels, and states that if he were required to furnish a locomotive for that service again he should send the same one if the Washington was not available. It was stated further that the Triton is of the same pattern as the engines generally used upon the Whitefield & Jefferson, the Zealand, and other lumber roads, and approved by those who have had long experience in handling logging trains.

The evidence as to Mr. Crouch's opinion of the Triton is conflicting. Mr. Mann testifies that after running her from Woodsville to Lancaster, Crouch said she was a smart engine, and he guessed she would work all right and do good business ; but the fireman, Mr. Balch, says Crouch criticised the engine at the landing because she had no leading trucks and her tender was too light ; said he did not consider her safe, and told him (Balch) if anything happened going down the hill to jump through the window.

Under these circumstances, with the question as to whether it was an error of judgment to send the Triton to Kilkenny hingeing entirely upon the opinions of men whose views are so greatly at variance, this Board can arrive at no decision which warrants a definite finding upon that point, or which, if stated, would or should be accepted as conclusive by parties in interest or by the public. The operation of a logging road in the mountain regions is necessarily attended by extraordinary hazard, and it is only by the selection of discreet and careful men and the use of machinery specially adapted not only to the logging business but to the peculiarities of each road, its grades, curves, and manner of construction, that many fatal accidents can be avoided. That the Kilkenny men were competent and faithful we have no doubt. That they had, on the 31st of January, the machinery that was safest and best, is, and it seems to us must always remain, open to doubt and to controversy.

H. M. PUTNEY,

For the Board.

DEATH OF MORRIS MAHONEY.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, May, 1890.

February 26, 1890, 2 o'clock P. M., at Fitzwilliam, Morris Mahoney fell or was thrown from the top of one of the cars on freight train No. 21 of the Cheshire Railroad, was run over, and sustained injuries from which he died within a few hours. He was not an employé of the company. As disclosed by the evidence, he was apparently stealing a ride on train No. 21 from Keene, and as that train was drawing by train No. 14, headed toward Keene, he jumped from the top of a car on No. 21 to the top of a car on No. 14, and again jumped back to the top of a car on No. 21, when he fell and was injured, with the result before stated. Train No. 21 was moving slowly, while train No. 14 was standing still. Henry C. Emerson, the brakeman on train No. 14, was the only person who saw him when jumping from train to train, as previously stated, and Mr. Emerson, and Mr. Stewart, the general manager of the Cheshire Railroad, were the only witnesses before the Board.

JOHN M. MITCHELL,

For the Board.

EDWARD DUFFICY.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, May, 1890.

Edward Dufficy, rear brakeman on freight train No. 17 of the Cheshire Railroad, at 6.45 P. M., March 19, 1890, when his train was running into Westmoreland, while in the act of stepping from the top of the saloon car to the top of the next car to set a brake, slipped and fell between the cars, was run over by the saloon car, had both arms and one leg broken, one foot cut off, and sustained other injuries from which he died at 9.30 the same evening. There was snow upon the top of the saloon car at the time he fell and that caused him to slip. He was about thirty years of age, and a prudent man. Charles H. Taggart, the conductor of train No. 17,

was standing upon the saloon car when Mr. Dufficy slipped and fell, and was, as disclosed by the evidence, the only person who observed the accident. The train, at the time of the accident, was moving at the rate of six or eight miles an hour.

JOHN M. MITCHELL,
For the Board.

DEATH OF EDMUND COYLE.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, May, 1890

Witnesses: F. A. Brown, shifter, and Henry Forbes, switchman.

An accident occurred in the yard of the Concord & Montreal Railroad, in Nashua, at about midnight March 29, 1890, which resulted in the death of Edmund Coyle, of Clinton, Mass., a brakeman. A freight train had reached Nashua, from Boston, and at this point several changes in the train were to be made, — different cars to be placed upon different tracks, and the train to be made up. The train was near the bridge over the Nashua river when the work of making the changes commenced. At first it was backed, and three cars were thrown upon a side track, on which was a brakeman to stop them at the proper point. The train then drew up towards the bridge, the switch was set by Mr. Forbes, and two more cars were thrown upon another track. On these was Mr. Coyle, who was to take charge of and stop them at the proper place. While these two cars were in motion, Mr. Coyle in some way fell between the rails, was run over, and killed. No one saw him fall, but he was soon discovered by the switchman about five rods below the iron bridge, lying upon his right side. His lantern when found was still faintly burning, and the wire around it bent. He was completely covered with dust, as he had been rolled under the cars by the brake-rods. It is supposed that he was standing near the rear end of the car, and when the engineer reversed steam Mr. Coyle was jerked off. One of his feet was cut off and he was in other ways badly injured. He died soon after he was discovered and could not before his death give any account of how the accident happened. He was an excellent man and had

been in the employ of the road about a week, though he had worked upon railroads before and had had experience in handling cars. There was no defect in the two cars on which he stood. The brakes worked well and the train was handled by the engineer in the same manner as is usual at that point in setting cars upon side tracks.

B. F. PRESCOTT,

For the Board.

DEATH OF JAMES DANA.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, May, 1890.

Investigation at Woodsville, May 5.

Witnesses: Nathan S. Knights and George M. Goss, of Haverhill, Frank H. Burleigh and Elmer Brown, of Concord.

As train No. 8 upon the Concord & Montreal Railroad approached the third bridge south of Warren, on the afternoon of April 5, the engineer, Frank H. Burleigh, saw a dark object upon the track between the rails near the middle of the bridge. He brought the train, which was running twelve or fifteen miles an hour, to a stop as soon as possible, but not until the locomotive had struck the object and thrown it from the track. An examination by the trainmen followed, and it was found that James Dana, an intemperate man who lay upon the track with a bottle of liquor in his pocket, had been hit and instantly killed. His head was completely crushed by the engine and his body badly bruised. We find no evidence that any trainman failed to do his whole duty or was in any way responsible for the fatality.

H. M. PUTNEY,

For the Board.

DEATH OF GUSTAVE A. GRAUPNER.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, May, 1890.

Investigation at Manchester, April 21.

Witnesses: Patrick Reagan, Moses C. Morey, Almon Ovett, H. E. Sackett, E. T. Sherburne, John W. Abells, Samuel Whitcomb, Herbert L. House, and William T. Graupner, of Manchester, Cornelius Doherty and John C. Hutchins, of Concord, and C. M. Carter, of Bow.

Gustave A. Graupner, a young man who resided in Manchester and was a loom-fixer by trade, was found fatally injured between the main track in the Concord Railroad yard in that city, at about 8 o'clock in the evening of April 11. He was discovered by Fireman Patrick Reagan and Engineer C. M. Carter, of the locomotive Victor, as they were going up the track upon the engine to begin a night's work making up trains. They immediately stopped, and with the assistance of other yardmen, took the injured man to the freight-house and summoned a physician. Mr. Graupner was unconscious when found and did not recover sufficiently to give any account of the accident. He died in a few hours. The evidence before the Board is that he had been out of work for several weeks and had no business which called him to the railroad yard. At 7 o'clock in the evening of the 11th inst., he was met at the corner of Elm and Bridge streets by his brother William, who walked with him to his boarding place on Middle street and endeavored to induce him to go in and go to bed. This he declined to do, and leaving his brother passed on toward the passenger station. So far as is known no one saw him again until after he was injured. None of the trainmen who passed through the yard between 7 and 8 o'clock noticed him or were aware until after he was found that any one had been injured. Mr. House, who passed over the spot on which he lay at 7.30, is positive that he was not there at that time. He was not run over by engine or car wheels. There was no blood or other marks upon any of the cars, and his serious injuries were all internal. These facts point to the conclusion that after leaving his brother he passed down through the passenger station and was going through the yard with a purpose to cross the railroad bridge over the Merrimack upon the North Weare road, and reach West Manchester; that as he walked between the tracks

he was hit by the side of the locomotive or cars of the accommodation train up at 7.36 and thrown violently upon the ground, causing the injuries from which he died. No one but himself could have prevented the accident.

H. M. PUTNEY,
For the Board.

JAMES HUSSEY.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, May, 1890.

Witnesses: W. E. Maloney, M. D., Dennis Curtin, brakeman, and James Hayes.

On the 22d day of March, 1890, at about 5 o'clock P. M., an accident occurred in the passenger station on the Cheshire Railroad in Keene. The facts in the case, as given by the witnesses, are as follows: The switching-engine in the yard had five cars attached to it, and wanted to uncouple two of them for the freight-house. Mr. Hussey, a brakeman, but not at that hour on duty, was standing upon the platform in the passenger station. Dennis Curtin, the brakeman on the car which was passing through the station, asked Hussey to pull the pin between the cars in order that the two might be thrown into the freight depot. Hussey stepped between the cars to do as he was asked, and while pulling the pin his arm was caught between the bunters and the flesh upon it was considerably pinched. No bones were broken. The attending physician testified that the wound would not necessarily cause his death, but that he died of another disease which might have been aggravated by the wound upon the arm. Mr. Hussey stepped from the train without any one to assist him. His arm required amputation, which was done on the 24th, and he died that night from mortification or blood poisoning.

B. F. PRESCOTT,
For the Board.

ROLLIN W. HOLBROOK.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, May, 1890.

Investigation at Woodsville, May 5.

Witnesses: George Van Dyke, Albee Harvey, and Thomas Flannery.

Counsel for the road: Aldrich & Drew.

Rollin W. Holbrook was at Colebrook on the 13th of March in an intoxicated condition. In the afternoon he was induced to take his team and start for home. He drove down the highway until he reached the Columbia crossing, when he was struck by the mixed train going south, thrown from his sleigh, and killed. For a distance of nearly three quarters of a mile above this crossing the highway and the railroad run nearly parallel to each other, the highway being several feet higher than the track, so that a train coming from the north is in plain view of a person driving along the road. The train that struck Mr. Holbrook was running about eight miles an hour, having slowed up preparatory to stopping at the flag station below. When forty or fifty rods above the crossing, the fireman, upon whose side Mr. Holbrook was, saw him passing along the road but assumed, as he had a right to do, that he would look out for himself, and turned his attention to his duties, which included the ringing of the bell at that point. The engineer, being upon the opposite side and engaged in watching the track in front of him, did not see the man at all until he was injured. The horse was not in the least afraid of a locomotive or cars. He was not injured by the collision, but one side of the sleigh was smashed. These facts lead us to accept the theory of the trainmen that Mr. Holbrook did not get upon the crossing, but on approaching it urged his horse forward, either because he did not see the train or because he thought he could pass in front of it, and the animal, finding he could not cross, left the road and started down the track, going so near the rails that the sleigh was struck by the engine or tender and its occupant thrown out. If he had not been intoxicated, and had exercised reasonable care, he would not have been injured, and his death is in no way chargeable to fault on the part of the corporation or its employés.

H. M. PUTNEY,

For the Board.

DEATH OF GEORGE THOMAS.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, June, 1890.

George Thomas, the fireman on passenger train No. 59, on the Concord & Montreal Railroad, on February 24, 1890, fell from his engine as it entered the southerly end of the Woodsville yard, was injured, and died almost, or quite, instantly.

This train was due in Woodsville at 6.55 P. M., and on the evening of the accident was on time, or nearly so.

At the crossing just northerly of the "Brick Store" Mr. Thomas rang the bell as usual. At this point the train was running at the rate of about eight miles an hour. Just northerly of this crossing at which the bell was rung, the engineer, Charles W. Hoyt, as he testified, saw Mr. Thomas standing in the gangway, one hand on the handle of the cab, and apparently looking towards a hot-box that was under the tender. At this point and when in this position he spoke to Mr. Hoyt. After this Mr. Hoyt neither saw nor heard him.

When the crossing next northerly of this place was reached, and where the engineer expected the bell would be rung by the fireman, it was not rung; the engineer called to Mr. Thomas but got no response.

At the time he was missed by the engineer the train was running at the rate of about six miles an hour.

At the time of the accident it was dark, and the engineer neither saw nor heard anything that attracted his attention until Mr. Thomas was missed by him from the discharge of his duty in ringing the bell at the crossing. The fireman's position was upon the left-hand side of the engine, and his body, when found, lay on the same side of the track. A slight, moist snow had just fallen, or was falling, at the time of the accident.

No one having seen him fall, there was no evidence as to the manner in which it occurred. His body was badly mutilated, but the testimony of the attending physician indicated that the fatal blow was inflicted on the back part of his head by a fall upon the rail, probably, which caused a fracture.

Mr. Thomas was a man of good habits and faithful in the discharge of his duties. He had been in the corporation's employ about two and a half years.

Dr. Charles R. Gibson, George E. Cummings, the trainmaster, and Charles W. Hoyt were the witnesses who testified before the commissioners.

JOHN M. MITCHELL,
For the Board.

ACCIDENT NEAR CHARLESTOWN. — DEATH OF WILLIAM H. AIKEN.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, June, 1890.

Witnesses: C. J. Knight, conductor; W. E. Clark, roadmaster; James M. Whitaker, M. D., and Martin V. Merrill.

William H. Aiken, of Palmer, Mass., a freight brakeman on the Sullivan County Railroad, was instantly killed near Charlestown, on Sunday afternoon, June 1, 1890, at about 6 o'clock. He was not on duty on the day of the accident, and his death occurred under the following circumstances: In the morning he went from Windsor, Vt., to Bellows Falls on a hog train, but in no way connected with the running of the train. He remained at the latter place during the day. In the afternoon he got upon another freight train at Bellows Falls to return to Windsor. Mr. Aiken got upon the locomotive and rode to Charlestown, or near there. After passing the Charlestown station he was seen walking upon the top of the cars. When passing under a bridge near by, his head came in contact with it with such force as to break his skull and instantly kill him. The conductor was at the time riding in the saloon car, and his attention was called to the accident by one of the train employés who was riding in the same car. The train was at once stopped and Mr. Aiken was found dead. Mr. Merrill, one of the witnesses, lived near the bridge, was looking at the passing train, saw Aiken when he hit the bridge and heard the sound of the contact, and saw him fall upon the car. The train was backed to the station, and a physician summoned, who found that he must have been instantly killed. Mr. Aiken voluntarily went to Bellows Falls, and was acquainted with the road and the bridges over it. His ride both ways was in clear daylight, and neither the corporation nor any one connected with the train can

be responsible for this sad death. Many of the frequent accidents upon the railroads seem to be due to carelessness on the part of those who are injured, as they expose themselves to danger unnecessarily.

B. F. PRESCOTT,
For the Board.

FATAL ACCIDENT AT CONCORD. — DEATH OF THOMAS B. DICKERMAN.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, June, 1890.

Witnesses: Henry C. Dimond, conductor; A. C. Hurlbutt, engineer; Harry E. Clark, fireman; J. L. Doucett, brakeman, all of West Lebanon, and Hiram T. Dickerman, of Concord.

On the 28th day of April, 1890, at about 2.37 o'clock P. M., Thomas B. Dickerman, of Concord, a trespasser on the Northern division of the Boston & Maine Railroad, was instantly killed. Passenger train No. 59 was approaching the city from the north. The train was composed of seven cars and at the point of the accident was running at the speed of about thirty-five miles per hour. The accident happened some way above the East Concord crossing, at the head of Main street, in Concord. It appeared from the evidence of Mr. Hiram T. Dickerman that his brother, who was killed, was an infirm man and entirely deaf, and had been for several years. He lived in Concord, and was in the habit of going about unaccompanied, though his family were greatly concerned about him, fearing he would meet with accident. On the day of the accident he started out after dinner to carry a bundle of his clothes to be washed. After leaving the bundle, it is supposed he went up the street towards West Concord, and then turned and went down upon the Northern Railroad track, and was returning to his home. He was discovered by the engineer when on the track. The whistle was sounded and he gave no attention to it when some considerable distance from him. On a nearer approach to him the alarm whistle was sounded several times. He was seen to step from between the rails and appeared to be in the act of turning round to look behind. The engine struck him and threw him on to the fence. The train was stopped after going about twice its

length. The conductor and brakeman went back and found that Mr. Dickerman had been instantly killed, as his head had been badly mangled. The brakeman remained with the body, while the train went to the station, and assistance was summoned to take charge of the body. The body was at once conveyed to the station and cared for by the proper authorities. No evidence was given showing why he went upon the track. He was a trespasser upon the road and no one appears to be responsible but himself, as the trainmen did all in their power, and all that is customary in such cases, to prevent accident.

B. F. PRESCOTT,
For the Board.

DEATH OF GEORGE JASON ANDERSON.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, June, 1890.

George Jason Anderson who, on May 29, 1890, and for a considerable time before that date, was telegraph operator and assistant agent of the Concord & Montreal Railroad at Whitefield, was, at 2.30 P. M., on that date, struck by an engine, run over, and sustained injuries from which he died about 6 o'clock on the morning of May 30th.

On the afternoon of the day of the accident, about 2.15 P. M., a train over the Whitefield & Jefferson Railroad reached Whitefield Junction, and to this it was desired to attach a car that was upon a siding. To accomplish this, two cars on the train were cut off and left upon the main track. The balance of the train ran down past the switch; Mr. Anderson, who was upon the engine, jumped from it and set the switch, after which the part of the train to which it was proposed to attach the car on the siding, backed over the switch on to the side track, Mr. Anderson walking in advance or near the engine as it passed the switch. After it passed over the switch he put his foot either upon the brake-beam or up toward it, and reached for the hook upon the hind end. In doing this he missed the hook, or his hold was broken in some way, and he fell backwards. As he was falling over, he threw himself partially sideways, rolling out; but the wheels of the rear truck of the tender

passed over his right leg, crushing it below the knee. The muscles of the hip were also severely stretched and apparently pulled out up to within a very few inches of the body. The only other external evidence of injury was an abrasion upon the face.

The engineer, George E. Hutchins, testified that he saw Mr. Anderson set the switch, and then saw him step in upon the track to go in advance of the tender, and that the next thing he heard from him was a cry, upon which he stopped as soon as possible, having moved, after the cry, only about six feet. When the engine was stopped, the engineer saw Mr. Anderson lying upon the ground outside the track on his side of the engine.

Mr. Anderson was immediately taken up, placed upon a spring bed, and carried to a place where he was properly cared for, and medical aid summoned. The physician, Dr. G. H. Morrison, reached him about 4 o'clock, and, with other physicians, remained with him until 5.30 A. M., the next day, when, after a consultation of physicians, it was decided to amputate the injured limb. The operation of amputation was performed by Dr. G. P. Conn, of Concord, assisted by Drs. F. F. Moffett, of Littleton, J. L. McGregor and G. H. Morrison, of Whitefield. When the operation was nearly completed — the same occupying about three fourths of an hour — Mr. Anderson died.

At the time he was struck and run over, that part of the train backing in on the siding was moving very slowly, and it had but about forty feet to go to reach the car to be attached.

William O'Connor, the conductor, and the brakeman of the train at the time of the accident, stood on the top of one of the cars left upon the main line, and observed Mr. Anderson at the time of the accident, and also at the time he set the switch and walked upon the siding to the point of the accident.

It does not appear from the testimony that there was any want of proper care on the part of the engineer or other employés having charge of the train at the time of the accident; nor does it appear that setting this switch on occasions of this kind was a part of the duty regularly imposed upon Mr. Anderson, or whether it was a duty he assumed voluntarily.

Although he survived several hours after the accident, the testimony did not disclose whether he was conscious of the manner in which it occurred or what his object was in trying to reach up and get hold of the hook upon the hind end of the tender as before stated.

The testimony of William O'Connor, the conductor, Peter Laughney, the brakeman, George E. Hutchins, the engineer,

Fred H. Bacon, the fireman, and Dr. George H. Morrison, one of the attending physicians, was submitted to the commissioners.

JOHN M. MITCHELL,

For the Board.

ACCIDENT IN NASHUA. — DEATH OF GERTIE M. SMITH.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, June, 1890.

Witnesses: George E. Jackson, driver; Frank G. Fairbanks, conductor; George E. Mudgett, assistant superintendent; and Mrs. Melvina Tremblay, all of Nashua.

An accident occurred on the 30th day of May, 1890, on the Nashua Street Railway, which resulted in the death of Gertie M. Smith, a child about four years old. It appeared from the testimony that Mrs. Smith, the mother of the child, was with her on the street, and returning home from the exercises of Decoration Day. Gertie, with other children, was at play upon the street and sidewalk as they were approaching the iron bridge over the Nashua river on Bridge street. Mrs. Smith and her daughter crossed the bridge from west to east, and a very short distance from the bridge met two ladies with whom she engaged in conversation. Her daughter stood on the sidewalk with her. The track of the horse railway crosses the bridge on the north side of the street, was located by the city authorities, and is from six and one half to seven feet from the curbstone of the sidewalk, and nearly parallel with it for some distance. The car was going from the railroad station on the Concord & Montreal Railroad to the stable of the company, and at a rate of about four miles per hour. The car was an open one, and at the time there were no passengers in it. The driver and conductor both saw the ladies standing upon the sidewalk engaged in conversation, and the little girl standing with them. When the car reached the point where they were standing, the child left the sidewalk alone and came in contact with the front end of the car, and was thrown under it. The driver saw the car hit her. The brake was instantly applied by him and the car was brought to a standstill while going about one half its length. The mother made an attempt to clutch her daughter when she left the sidewalk, but failed to get hold of her, and thus the painful and distressing acci-

dent occurred. The child was rolled over under the car by the brake-rods, but the wheels did not pass over her, as appeared from the testimony. She was taken from under the car and carried to a house near by, and physicians immediately summoned, but no amputation of her limbs was made, and she lived until Sunday, June 1, when she died about 12 o'clock. The girl had been playing with other children while walking upon the street, and had just separated from one who had just crossed the street to the opposite sidewalk. Quite likely she was impatient to go, and leaving her mother, stepped too far toward the car. The distance from the whiffletree of the car to the sidewalk was more than four feet, and the car could not possibly hit any person unless he stepped towards the track. It was in clear daylight, and nothing was in the way to obstruct the view of the approaching car, which was running at the ordinary speed at this point. Those in charge of the car had no reason to suppose that the child or any one else would step so near as to be hit while it was in motion, and no signal whatever was given for it to stop. It was one of those unfortunate accidents which occasionally occur when no one is to blame, and when it is impossible to prevent it.

B. F. PRESCOTT,
For the Board.

ACCIDENT ON MAINE CENTRAL RAILROAD. — DEATH OF ALEX. CUNAN.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, June, 1890.

Witnesses: George H. Morey, E. Walch, of Hart's Location, and William H. Yates, of Bartlett.

Alex. Cunan, said to belong in Bangor, Me., got off passenger train No. 164, on the Mountain division of the Maine Central Railroad, at Sawyer's River station, at about 9.30 P. M., May 5. His body was found at 5 A. M., May 6, near the station, where he was probably killed by one of the night trains. William H. Yates testified that he was engineer on locomotive No. 107, and at about 11 o'clock that night passed Sawyer's station, and went to Bartlett, and that he was the first to pass after the passenger train went up the

road. The cleaner of locomotives at Bartlett saw blood stains on the brake-hangers and brake-beams of this engine and called the attention of Mr. Yates to it. Mr. Yates had occasion at about 2.25 A. M. to go on an assistant engine to help a freight train to Crawford's, and returned to Sawyer's River, reaching there about 4.45. He then saw a body lying in the middle of the track. He stopped the locomotive. He found a piece of tobacco and a knife open about ten feet from the body. The body looked as though it had been dragged about thirty feet. The body was taken from between the rails and properly cared for. His head was completely severed from the body and was lying about ten feet from it, and one arm was severed from the body and was about fifteen feet distant.

Cunan had worked about there in the logging swamps, and his temporary home was about two miles away. Some companions were there at the arrival of the passenger train, but he did not go from the station with them. He was in an intoxicated condition, and offered liquor to others, which he had in a bottle. Near his body was some glass which appeared to be a part of a bottle. There seems to be no question but that he came to his death by his own act; that he was under the influence of intoxicants; that he got upon the track and was run over by the locomotive above described. The officers of the road and the managers of the trains, as it seems, could have done nothing to prevent this accident, and are not responsible for his death.

B. F. PRESCOTT,

For the Board.

DEATH OF CORNELIUS CONNORS.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, June, 1890.

Cornelius Connors, the foreman on the Great Falls section of the Western division of the Boston & Maine Railroad, while at work on the track of his section, on June 5, 1890, at 4.52 P. M., was struck by mixed train No. 288, on its way from Great Falls to Rollinsford, and instantly killed. This train was due to leave Great Falls at 4.45, and left on time, and had proceeded only about three fourths of a mile, running at the rate of twenty miles an hour, when Mr. Connors was struck and killed.

There were at work on the track at the time, under Mr. Connors, two other sectionmen, John J. Wimeau and Timothy Mennehan. Those two were at work together, and about fifty feet nearer Great Falls than Mr. Connors was when struck. As the train approached the place where the sectionmen were, — as they continued to work and were apparently unconscious of the train's approach, — the engineer and fireman "tooted" the whistle and rang the bell. These signals admonished the first two sectionmen reached and they jumped from the track and escaped injury; but although the same signals were repeated and continued on approaching Mr. Connors, he did not look up from his work or apparently notice the train until it was upon him, when his apparent effort to leave the track was unavailing. When within about thirty feet of him, it being apparent that he was unconscious of the train's presence, the engineer whistled for brakes, which were immediately applied, but before the train could be stopped it had struck, run over, and killed Mr. Connors. As stated by the trainmen, Mr. Connors, when approached, appeared to be in a deep study.

The track at this point is straight, and the train, in the direction it was coming, could have been seen and heard a long distance if a person was looking or listening.

At the time this train struck the deceased there was a freight train running north from Conway Junction on a track at this point running nearly parallel with the one on which Mr. Connors was, and only about seventy feet from it. This freight train was at the time making a great deal of noise and, presumably, either the noise it made interfered with Mr. Connors' hearing the train which struck him, or the presence of this freight train on the other track attracted his attention so that he forgot about the one that killed him.

This was a regular train, on time, and the evidence tended to show proper management of it by the trainmen, and that they did all they could to signal Mr. Connors to leave the track, and also to stop the train when it became apparent he did not notice its approach.

Mr. Connors was a steady, industrious, faithful man, and had been in the company's employ, on this section, for twenty-three years, being foreman the greater part of the time.

Samuel L. Hessey, the engineer, Albert E. Stevens, the fireman, John J. Wimeau and Timothy Mennehan, the subordinate sectionmen, Bernard Fox, the baggage man, Wesley F. Sanderson, the brakeman, Eugene E. Lowd, the conductor, and James McCabe, who at the time of the accident was digging holes for telegraph

poles between the road on which the deceased was at work and that on which the freight train from Conway Junction ran, testified before the commission.

JOHN M. MITCHELL,
For the Board.

ACCIDENT AT SANDOWN — DEATH OF JOHN R. MURRAY.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, June, 1890.

Witnesses: Charles J. Hale, conductor; Robert Richards and Louis F. Doran, brakemen.

Freight train No. 24 on the Worcester, Nashua & Portland division of the Boston & Maine Railroad, passed over the road May 20, 1890, as usual, and took on milk at various stations which was put into a car provided for that purpose. When the train reached Epping from Rochester, at about 8 o'clock, it came to a standstill before it crossed the Concord & Portsmouth Railroad, as the signal was not set for it to cross. A brakeman went ahead to set the signal and found a man lying in the center of the track where the Worcester, Nashua & Rochester crosses the Concord & Portsmouth. He got him off and found that he was intoxicated and in a bad condition. The train then drew up and stopped at the freight-house to take on cans of milk. While there, Murray got on to the train and was not noticed by the men in charge of it, and after it had left the station the conductor, Mr. Hale, told him he could not allow him to go to Windham Junction, his destination, without a permit from the proper officers of the road. The train reached Fremont and permission was not obtained there to allow him to ride. The conductor then told him that he could not allow him to ride beyond Sandown, and that he must leave the train at that station. Before reaching the station at Sandown he passed out of the saloon car and attempted to get into the milk car, which was the rear car on the train. An effort was made to stop him from leaving the saloon car, but not in season. While attempting to enter the milk car he fell between the cars and was instantly killed. As soon as the train could be stopped, which was after it had gone some distance, train hands went back and found him. One of them

remained with the body, and Mr. Hurlbutt, superintendent of the road, was soon notified, and he gave directions to do everything in the proper case. The selectmen of Sandown were notified, and they took charge of the body, but held no inquest, as it was perfectly clear how he was killed.

Murray was a section hand on the same road but was not on duty that day. His condition was such that the trainmen tried to keep him quiet in the car but it was impossible to do so, and he finally passed out and took the fatal step.

B. F. PRESCOTT,
For the Board.

DEATH OF FRANCIS HANLON.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, June, 1890.

At 6 o'clock A. M., May 27, 1890, the body of a man who it was subsequently ascertained was Francis Hanlon, of Dover, was found on the track of the Northern division of the Boston & Maine Railroad running from Dover to Rochester, between the Rochester and Gonic stations.

The body, which was terribly mangled, lay between the rails with the clothing nearly all torn from it. The head was severed from the body and lay west of the rail. The last time the deceased was seen alive was about 8 o'clock P. M., in the village of Rochester, when he was intoxicated and traveling in the direction of Dover. His clothing, as it was torn from the body and strewn along the track, and the indications of bleeding found upon the track, indicated that he was struck by a train going from Dover to Rochester and by it dragged, or pushed, a distance of an eighth of a mile or more, run over, and killed.

He was seen by no trainmen and the first discovery of his death was made by Stephen S. Jenness, who lives near the place of the accident, and who found the body in the condition and position before described. Mr. Jenness immediately notified the chairman of the board of selectmen of Rochester, who took charge of the body and, at the town's expense, prepared it for burial, after which it was taken to Dover and interred.

After 8 o'clock P. M., May 26, the time Hanlon was last seen in Rochester, and when apparently on his way to Dover, the only train passing over the road where the body was found before 6 o'clock A. M., May 27, was freight train No. 13, from Dover to Rochester, which was due in Rochester about 9 P. M. From the evidence, showing where Hanlon was last seen, his course of travel, the condition and location of the body, and the evidences upon the road and track, it is manifest that he was on his way to Dover, and when on the track, either lying, sitting, or standing, was struck by freight train No. 13, dragged, and killed.

The evidence disclosed that the deceased was a man of bad habits and bore a poor reputation.

The witnesses who testified were A. S. Parshley, chairman of the board of selectmen of Rochester, and Stephen S. Jenness, who first discovered the body.

JOHN M. MITCHELL,

For the Board.

DEATH OF EDWIN A. HOFFMAN.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, July, 1890.

June 22, 1890, at 12.20 A. M., Edwin A. Hoffman, the rear brakeman on northbound freight train No. 14 of the Northern division of the Boston & Maine Railroad at Penacook, fell, or was thrown, from the top of the first car from the saloon between the first and second cars, and was run over and instantly killed. This train was due to leave Concord at 11.15 P. M., but being late did not leave until 12 o'clock, midnight. Freight train No. 13, southbound over the Northern Railroad, was due in Concord at 10.30 P. M., but it was late and passed No. 14 at Penacook; and in order to permit No. 13 to pass, No. 14 had to be side-tracked at Penacook. As No. 14 was approaching the switch, at the point where it was to be side-tracked, the conductor, F. O. Brown, and Mr. Hoffman were in the saloon. The conductor left the saloon and went on top of the train to set brakes to stop it, and Mr. Hoffman followed him. The conductor set the brakes on the saloon car and the five cars next forward of it; the brakeman set none, as he was in the rear of the conductor, who set all the brakes as he reached them. The conductor had his lan-

tern, but Mr. Hoffman, notwithstanding rule 65, which requires that "freight conductors, brakemen, and yardmen, when on duty upon or around a train in the night, must have a white light in their hand or within reach at all times that their position may be known by other trainmen and employés," did not have his lantern with or near him. He left it in the saloon car.

When the conductor was setting the brakes on the third car from the saloon he saw Hoffman on the first car from the saloon apparently going forward toward the conductor, and this was the last he saw of him alive. As the conductor set the brakes on the fifth car he looked back and could not see him, and immediately returned to the saloon car to see if Hoffman had returned to it, and not finding him in the saloon he went to the forward end of the train, inquired of the head brakeman, Mr. Chase, if Hoffman was there, and receiving a negative reply he ordered the train stopped, which was done as soon as possible. As soon as the train was stopped search was made for the missing brakeman which resulted in finding his dead body across the west rail of the track cut completely in two, the head and shoulders lying outside the west rail and the rest of the body between the rails. The location of the body was about twelve car lengths from the saloon. A physician, policeman, and undertaker were immediately summoned by the trainmen, and the body placed in their charge. The train when it approached the switch was moving at so rapid a rate that before stopping it passed the switch about two car lengths. It then backed about twelve car lengths before it was stopped by direction of the conductor to find Mr. Hoffman. The conductor testified that while the train was on the forward movement he felt the saloon car pass over something, which undoubtedly was the body of Mr. Hoffman. This was very soon after he last saw Mr. Hoffman.

Considering the location of the body when found, the position of Mr. Hoffman upon the first car when last seen by the conductor, and his apparent advancement toward the forward end of the train, it appears quite probable that in attempting to pass from the first to the second car he made a misstep, or stumbled, and fell headlong between the first and second cars and was run over by the first and saloon cars in this forward movement, and that in backing the train the saloon and the twelve cars next forward of it ran over the body. It is evident, too, from the character and weight of the first car and saloon which first passed over him that life was extinct before the train commenced backing over the place where the body lay. Except the conductor no one saw the deceased after he left Concord. When he left the saloon and followed the conductor on to the train,

as before described, he was apparently all right and in the full pos session of all his faculties.

Mr. Hoffman at different times for the last twenty years labored for the Northern Railroad Corporation and its lessees. He was about fifty years old and resided at Lebanon.

The witnesses who testified before the commission were Conductor F. O. Brown, Engineer J. C. Muzzey, Head Brakeman Henry Chase, Fireman Moses Eaton, and Frank D. Holmes, who was a passenger on No. 13.

JOHN M. MITCHELL,

For the Board.

DEATH OF GEORGE COCHRANE.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, July, 1890.

Investigation at Portsmouth, July 5.

Witnesses: John McCarty, Alvah Jellison, William H. Toner, and Edward Clark, Portsmouth; D'Orville Pinkham, Dover Point; Stephen Adams, Kittery, Me.; James Drew, Newington.

As George W. Ford, and his grandson, George Cochrane, a boy of about eight years of age, were riding over Ford's crossing near Dover Point upon the Portsmouth & Dover Railroad, at about 5 o'clock on the afternoon of June 27, the horse and wagon were struck by the tender and baggage car of train No. 586, and the occupants of the carriage were thrown to the ground with such violence that the boy was fatally injured and died about an hour afterwards. Mr. Ford was badly bruised and dazed by the fall, but was able to walk about immediately and has since nearly recovered. The engineer, John McCarty, of Portsmouth, testifies that he saw nothing of the team until after the collision, and was first made aware that the crossing was not clear when the tender and carriage came together upon the fireman's side of the locomotive. He then brought the train to a stop as soon as possible after it had run about 600 feet, and going back found Mr. Ford standing upon the crossing and calling for his horse, and the boy about fifty feet away lying in the ditch in an unconscious condition. He at once carried the boy to his grandfather's house, which was just across the track, and with the help of other trainmen and neighbors, who soon congre-

gated there, summoned a physician from Dover and cared for him until he died.

The fireman's testimony is to the effect that he first caught a glimpse of the team under the side rod upon the outside of his seat, and an instant later saw the tender and the step of the baggage car strike them and hurl them into the ditch.

It appeared further that the train was a regular one, was running upon schedule time, at the usual speed, and the crossing whistles were blown as required by law; that there were no marks upon the engine indicating that it hit the team at all; that the paint was scraped from the side of the tender, and the step upon the baggage car was twisted out of shape; that neither the team, Mr. Ford, nor the boy were struck by the car wheels; that the side and hip of the horse next to the train were badly broken and bruised, and that the spokes were all broken from the carriage wheels on that side. Mr. Ford, who is about sixty-five years of age, is very deaf. His horse was not in the least afraid of cars or locomotives. He has for many years resided close to the track, and has been accustomed to cross and walk upon it daily in carrying the mail to and from the post-office, and going to and returning from a brickyard which he owns. His familiarity with the road and trains at that point led him to underestimate the danger of going upon the track, and he had been repeatedly warned by the trainmen to be more careful than he was. The highway upon which he was driving runs for some distance nearly parallel to the railroad, and not far from it, until it swings to the east and crosses the track at the point where the accident occurred. Between the railroad and the highway is a growth of trees and bushes belonging to Mr. Ford, which obstruct the view.

These facts all substantiate the theory that Mr. Ford as he drove along did not hear the approaching train because of his deafness, that he did not see it because of the bushes, and that his horse not being restrained and not being frightened reached the crossing just as the locomotive did, and then swung quickly around bringing the carriage into a position where it was struck and destroyed by the tender and baggage car. Mr. Ford was not present at the investigation, but some of his neighbors testified that he said to them he knew nothing of how the accident occurred, but accounted for his being upon the track at a time when he knew the train was due by saying he had a borrowed watch which was wrong.

We do not see how any railroad employé could have prevented this accident, or is to be held responsible for it; but it is probable that if the bushes between the track and the highway had been re-

moved it would not have occurred; and the fatality emphasizes the necessity of clearing away the obstructions of this kind which make so many of our crossings blind ones and greatly increase the danger incident to their use.

It is within the province of the Legislature to enact a law which will not only permit railroads to remove such obstructions upon payment of their small value to the land-owners, but to empower this Board to compel them to do so whenever it will decrease the grade-crossings' hazard to life and property.

H. M. PUTNEY,

For the Board.

DEATH OF GEORGE JONES.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, August, 1890.

George Jones, a brakeman on freight train No. 3, on the Northern division of the Boston & Maine Railroad, July 29, 1890, at 9.20 o'clock A. M., while uncoupling cars caught his foot in a rail frog, was thrown upon the track, run over, and instantly killed. The accident occurred at Wolfeborough Junction. The trainmen were, at the time of the accident, doing shifting on the wood-track siding. Immediately before the accident six cars had been backed from the wood track to the main track. When these cars were backed upon the main track the train stopped to allow another train to leave the main track. After the other train had left the main track, Mr. Jones, the deceased, gave the usual and customary motion to signal the train to move up the track. This motion was taken from Mr. Jones, and by the fireman communicated to the engineer, who started the train up the track at a slow rate of speed. As Mr. Jones motioned the train to move up the track he was ordered by the conductor to pull the pin between the saloon and a wood car next to it. When in the act of executing this order the deceased apparently stepped upon or into a rail frog, caught his heel, fell under, and was pushed along by the cars about sixty feet, and sustained injuries from which he died before he was reached. Immediately after he fell he was seen by the fireman, who notified the engineer, and the brakes were immediately applied, and the train stopped. The train was in motion, moving at about four miles an

hour when the deceased pulled the pin, notwithstanding a rule of the corporation prohibiting the pulling of a pin while a train was in motion. The shoe of the deceased, the heel of which was caught, remained in the frog, he having pulled his foot out of it. The pin was found upon the ground at the point where it was pulled, and not upon the "dead wood" of the car, where usually placed when pulled. The car wheels did not run over the body, but the back and some of the ribs were broken, and one of his shoulders was badly injured.

Mr. Jones was about twenty-two years old, and resided at Alton, where his remains were taken for burial. He was an ordinarily prudent and faithful employé.

The witnesses who appeared before the commissioners were Frank G. McCrillis, the engineer; Herschel Moulton, the fireman; James Tucker, foreman of the shops; and Fred M. Wentworth, the conductor of the train.

JOHN M. MITCHELL,
For the Board.

DEATH OF JAMES TWOHEY AND ALBA LULL.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, August, 1890.

James Twohey, the superintendent, and Alba Lull, a sectionman of the Upper Coös Railroad, while riding on engine Stewartstown northerly over a culvert on Cone brook, six miles north of North Stratford, on May 20, 1890, at 8.20 P. M., met with an accident which resulted in their instant death.

The circumstances producing this unfortunate result were substantially as follows: The night was dark and rainy, and rain had fallen heavily for nearly three days, causing a very considerable rise in the Connecticut river and the brooks and smaller streams in that vicinity.

When passenger train No. 10, from Colebrook to North Stratford, at 5.30 P. M. on the day of the accident, passed a point called Bartlett eddy (a small eddy in the Connecticut river near the railroad about a mile north of Cone brook), the track partially sunk under the train on account of a partial washout of the roadway; and the

sectionmen, W. H. McGrath, and the deceased, Alba Lull, who were at work south of the point, were notified by the conductor of the train of the partial washout at Bartlett eddy.

After this notice to the sectionmen the train completed its trip to North Stratford without difficulty. The Cone brook culvert, when passed by this train, was found to be in its usual condition, although the brook was evidently rising. On reaching North Stratford information of the condition of the road at Bartlett eddy was communicated to Mr. Twohey by the conductor of the train, Frank Mills.

Train No. 10 left North Stratford for Colebrook at 7.55 P. M., being ten minutes late, and Mr Twohey went upon it for the purpose of inspecting the condition of the road at Bartlett eddy and making provision for its repair. He had no information when he left North Stratford, nor had any of the trainmen, that there was any danger in passing Cone brook culvert, or any other point on the road except Bartlett eddy. When the train reached a point three fourths of a mile south of Cone brook, it was flagged by Mr. Lull, the deceased, who had been sent by Mr. McGrath, the section foreman, to notify the trainmen that the road had washed out at Bartlett eddy, and was impassable. Mr. Lull, when the train had stopped, did so notify the trainmen. On receiving this information the train was backed one fourth of a mile, to Eaton's lumber yard, that Mr. Twohey might see if the requisite kind and quantity of lumber to repair the road could be procured. Mr. Twohey, not finding at Eaton's such lumber as he desired, ordered the cars of the train, being two, with fifteen passengers, to be side-tracked at that point, and decided to go with the engine to Bartlett eddy and ascertain the extent of the washout and the kind and quantity of lumber necessary for the repair of the road. In addition to the engineer and fireman, Mr. Twohey was accompanied upon the engine by the conductor of the train, Frank Mills, the brakeman, John La Tierneau, and Mr. Lull, the sectionman. There was no evidence that Mr. Twohey requested Mr. Lull, or the conductor, or brakeman, to accompany him. Mr. Twohey occupied the fireman's seat on the engine; the conductor stood in the gangway between the tender and engine; Mr. Lull stood leaning against a board which kept the coal in place; the fireman stood by the engineer; the brakeman stood in the gangway back of the engineer's seat, and the engineer occupied his usual position. Mr. Lull's residence was a short distance from the road northerly of the Cone brook culvert. When Mr. McGrath, foreman of the section, directed Mr. Lull to notify the trainmen of the condition of the road at Bartlett eddy he expected that Mr. Lull would travel over and inspect the road between that point and the

place where he met the train, which would include the place of accident, and Mr. McGrath understood at the time, and still understands, that Mr. Lull did take that course. Mr. Lull had a lantern when he met the train.

Before reaching Cone brook culvert steam was shut off, and the engine was not moving faster than five miles an hour when it reached and passed over the culvert. When within half a mile of the place of accident the engineer inquired of Mr. Lull, the deceased, as to the condition of the road between that point and Bartlett eddy, and he inquired particularly about the condition at Cone brook culvert, the place of accident. Mr. Lull said the road was all right at Cone brook and the whole distance to Bartlett eddy, with the exception of four or five ties that were washed out at a point opposite Cone's barn, about half way between Cone brook and Bartlett eddy. Mr. Lull said those ties would have to be "trigged up" before the engine passed that point. Mr. Twohey, who overheard a part of the conversation between the engineer and Mr. Lull, put similar questions to Mr. Lull as to the condition of the road and received the same information. As the forward part of the engine left the north side of the culvert, the road being washed out north of the culvert, the engine ran into the brook, falling a distance of from thirteen to fifteen feet into a depth of about three feet of water, and falling upon its left side. All the men fell into the water, but all escaped with slight injury except Mr. Twohey and Mr. Lull, who were instantly killed. The foundation and superstructure of the culvert were apparently in a safe condition at the time. The difficulty consisted of the washout north of the northerly side of the culvert, caused by the sudden rise in the brook and forcing a channel upon the northern side of the culvert.

The section foreman, Mr. McGrath, testified that he regarded the culvert unsafe because it was not large enough to admit all the water in times of high water; he testified that about two weeks before the accident it was partially washed out northerly of the north abutment, and he stopped a train on account of its condition, and called the attention of the roadmaster to it, and was directed by the roadmaster to repair it, and he did so by putting into the place washed out, brush and stone, and that from the time of this repairing until the time of the accident all trains had safely passed over the culvert. He also testified that Mr. Lull was familiar with the culvert and the character of its construction and repair, having worked upon the section from May, 1889, until late in the fall of that year, and was again employed in the spring of 1890, and was at work there at the time of the repair of the culvert and assisted in

making those repairs. But, as before stated, the immediate cause of the accident was the sudden rise in the stream, causing an unexpected washout outside the culvert, which was not discovered in consequence of the darkness of the night.

Mr. Twohey was thirty-eight years of age and had been superintendent since January, 1888. He was a careful and efficient officer. Mr. Lull was twenty-nine years old, and while he served the corporation, during the summer and fall of 1889, and to the time of the accident during the spring of 1890, he did so as a faithful and industrious employé.

The witnesses who testified before the commission were Frank Mills, the conductor; Don A. Bickford, the fireman; W. H. McGrath, the section foreman; and Thomas Flannery, the engineer.

JOHN M. MITCHELL,

For the Board.

DEATH OF EDWARD THOMPSON.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, September, 1890.

Investigation at Dover, September 1, 1890.

Witnesses: Fred H. Emerson, J. Q. A. Farley, and C. A. Davis, Dover; Daniel Wentworth, Berwick, Me.; Edward Norton, Boston, Mass.; I. C. Nealand, Charlestown, Mass.; Eugene Foss, Manchester.

Edward Thompson, of Dover, one of the owners and managers of Niles Express Company, which does the express business upon the Boston & Maine Railroad between Dover and Boston, was almost instantly killed at the passenger station in Dover on the evening of August 23. Passenger trains No. 134 from Portland and No. 87 from Boston are due to meet at Dover. They were about on time on the day of the accident, and the Boston train ran in upon the outside track from the station, while the Portland train ran in upon the inside track, close to the platform. Mr. Thompson was present, as usual, to receive and care for the express matter from Boston, and when both trains were nearly opposite him he rushed across the first track in front of the locomotive on the Portland train, intending to reach the one from the opposite direction and assist in unloading his express freight.

There is a raised platform between the two tracks, and he had stepped upon this with one foot when he was struck by the bunter of the engine from the east, thrown under the wheels, and so injured that he died soon after. There were several witnesses to the accident, and they unite in testifying that before he started Mr. Thompson was looking at the incoming Portland train, and was undoubtedly aware of its approach, but miscalculated its speed, or the time it would take him to cross in front of it. He was not an employé of the road, but had been for many years engaged in the express business, and was so accustomed to work about the trains at Dover that he had evidently become unmindful of the danger of attempting to cross in front of a moving engine, to which must be ascribed his death. It was not in the power of any other person to have saved his life.

H. M. PUTNEY,
For the Board.

DEATH OF FORREST L. DOW

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, August, 1890.

July 29, 1890, at 6 o'clock P. M., Forrest L. Dow, a brakeman on the Maine Central Railroad, on train 178, while the train was moving westerly at the rate of ten miles an hour, in the town of Dalton, east of the Connecticut and west of St. John's river, being in the act of looking and leaning from the gangway of the engine, was struck by a stock car which stood on a side track and was instantly killed. Just before the accident Mr. Dow was sitting in the engine, and while there the engine approached a woodchuck and apparently run over him, and immediately after running over the woodchuck the deceased left the seat, went to the gangway, took hold of the handle of the cab with one hand and that of the engine with the other, leaned out towards the stock car on the side track, and was apparently looking for the woodchuck, when his head, back of the ears, struck the stock car, which inflicted fatal injuries that caused him to fall to the ground where he was found dead. The stock car that inflicted the fatal injury was evidently unnoticed by him in the hurry and excitement of the moment.

The deceased was a regular brakeman on this train. He was a resident of Lee, Maine, about twenty-two years old, bore a good reputation, and was a faithful and intelligent employé.

The witnesses who testified before the commission were Everett C. Burnham, the fireman; William F. Kimball, the engineer; and W. H. Greeley, the conductor.

JOHN M. MITCHELL,

For the Board.

DEATH OF MICHAEL WHALEN.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, August, 1890.

As James Clark, a watchman at Blood's Locomotive Works in Manchester, stood watching the freight train which followed the last passenger train north, between 9 and 10 o'clock on the evening of May 24, he saw a man pass along upon one of the cars towards the rear of the train, and soon after disappear. A little later, when the train had passed, a man was found upon the track at that point fatally injured. It proved to be Michael Whalen, the assistant yard-master in the Northern yard at Concord.

A searching investigation has failed to discover any evidence establishing beyond doubt the cause of this accident, or showing just how it occurred. A man answering Whalen's description was at the Manchester station after the departure of the passenger train for the north, asking when the freight left, and from this it is supposed that, having failed to take the passenger train as he intended, he attempted to reach his home in Concord by getting upon the freight, and that he slipped and fell while going back to get into the saloon car. None of the trainmen knew he was upon the cars, or that any one had been injured, until they reached Concord, and so far as can be learned, no one saw him get upon the train.

H. M. PUTNEY,

For the Board.

ACCIDENT NEAR NASHUA. — THOMAS KENNEDY KILLED.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, August, 1890.

Witnesses : E. D. Brown and R. C. McMurphy, freight conductors, Concord.

Thomas Kennedy, of Manchester, was fatally injured on the Concord & Montreal Railroad, near Nashua, on the 15th of July, 1890, at about 3.35 o'clock in the morning, and died from his injuries on the 18th of the same month.

As near as could be learned from the evidence, two men boarded a freight train at Nashua, bound for Manchester, on the 15th of July, but were not inside any car. When a mile or more north of the city of Nashua, they attempted to get off, or fell off at different points, as both were probably under the influence of liquor. As a train from Manchester to Nashua passed the points where they got off, something was discovered on the tracks, by one on the train down from Manchester, which looked like a man. As soon as information could be given the train was stopped and backed, and one of the trainmen found a person uninjured but in a bad condition of intoxication. He pulled him off the up track and got him where he could not be injured by trains. The train was backed to a point where a man was found lying between the rails on the up track from Nashua. Here Kennedy was found in an unconscious condition, with a wound in the back of his head and blood issuing from both of his ears. He was first discovered by conductor of freight train going to Nashua, who was standing in the door of the saloon car. Mr. Kennedy was taken to the freight-house in Nashua and was taken care of by proper authorities. Mr. Brown, the switchman in the north of the yard at Nashua, was satisfied that the two men were those he saw board the train from Nashua to Manchester. It is not supposed that the train hit him, but that he received his injury when he fell from the train between the rails. After he died he was brought to Manchester and buried. Neither the corporation nor any of its employés can be responsible for this sad accident, for they knew nothing of it until they discovered the men lying upon the tracks. As no one saw the accident when it occurred, but little positive information could be obtained. It is one of the many deaths which occur on the railroads

when people under the influence of liquor attempt to get a ride from one place to another and fall or slip from the place they occupy on the trains. No one can be held responsible but themselves.

B. F. PRESCOTT,
For the Board.

DEATH OF HARRY L. HOWE.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, August, 1890.

Investigation at Concord, August 17.

Witnesses: Charles H. Straw, Jerry Follansbee, Lerman S. Webber, and Frank T. Tucker.

Counsel: For the corporation, George E. Todd; for the administrator, Samuel B. Page.

Harry L. Howe, a brakeman upon freight train No. 22 upon the Concord & Claremont division of the Northern Railroad, while standing on the top of a National Dispatch car as his train was going north on the morning of July 16, was struck by the overhead highway bridge, known as the Horse hill bridge, a short distance above the Mast Yard, thrown down into a coal car which followed the one on which he stood, and was so badly injured that he died about seven hours later.

He was a young man of about twenty-two years, sober, faithful, and competent, and six months' experience upon the road had made him familiar with its bridges and other dangers. The one eyewitness of the accident was L. S. Webber, an engineer who was not on duty that day but was riding upon the locomotive to his home in Contoocook. His account, which is corroborated by all the other witnesses, is this. When the train reached West Concord he assisted Mr. Howe to load some freight, after which Howe climbed upon a National Dispatch car, which was the ninth in number from the tender, and he, Webber, got upon the locomotive and volunteered to do the fireman's work. Somewhere in the vicinity of the river bridge, which is fifty to sixty rods below the overhead highway pass, a pin flew out of the coupling between the tenth and eleventh cars and the train parted. When Mr. Webber and the regular enginemen became aware of this, they turned their attention to the rear section to see what progress it made, in order that

they might keep out of its way, and he saw Howe standing upon the box car with his hand upon the brake-head and looking intently back, where he remained until he struck the bridge and was thrown into the coal car behind.

Undoubtedly the first cause of the fatality was the parting of the train, which so engrossed Mr. Howe's attention that he failed to notice his near approach to the bridge. There are regulation guards 125 feet below the bridge, and they were in good order that day with the exception of a bend in one of the wires, which did not, we judge, impair their efficiency as warning signs; but whether he was bent over so that they did not strike him, or he hit them without being aware of it, cannot be told. We do not see that any one was directly responsible for the accident. The most that can be said is that it probably would not have occurred if the coupling from which the pin jolted had been of a different pattern, or if the bridge, which had previously caused the death of at least one trainman in a similar way, had been eighteen feet instead of fourteen feet above the track.

H. M. PUTNEY,
For the Board.

ACCIDENT NEAR WOLFEBOROUGH JUNCTION. — DEATH OF BERT WILLEY.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, August, 1890.

Witnesses: Andrew Meikle, engineer; George W. Chapman, fireman; Hector Scott, brakeman; Clarence O. Brock, conductor.

On the 18th day of June, 1890, a fatal accident occurred near Wolfeborough Junction on the Northern division of the Boston & Maine Railroad, at about 2 o'clock in the morning. In the afternoon of the 17th a train loaded with ice went from the Junction to Dover.

The trainmen took back a large number of empty cars to be again loaded with ice. The train reached the above-named point a few minutes before the accident happened. They were to set the train off on a siding, but when they reached there another train was standing upon it waiting for this train of empty cars. As soon as possible the train on the side track drew out to allow the other to go upon it. The conductor went to the switch and set it for the

train to run in. He gave orders to Mr. Willey to pull the pin between the car and the locomotive, and to attend to he brakes upon the forward end of the train. He also assigned anc' r brakeman to handle the brakes on the rear end of the train. He then gave the signal for the engineer to move, which he did, and gave the train sufficient momentum to go in. Mr. Willey performed his duty, but in some way unknown to any one, made a misstep, or failed to hold on the ladder, and fell under the train, and all the cars passed over him. He was soon missed, and search being made he was found between the rails sitting up, but both legs were completely crushed, and he was in other ways badly injured. His lantern was found near him. He was unconscious. He was at once conveyed to the station, and from there to a private house, when a physician was summoned and everything was done for him that could be. The physician did not amputate his limbs, as he could not survive the operation, and in his opinion could live but a very short time. He died in a few hours. His remains were properly cared for and sent to Conway for interment. Mr. Willey was a faithful employé, and had worked upon the road in various ways for more than twenty years. The train was handled carefully, and when going in upon the siding was not moving faster than a person could walk. He was found near where he pulled the pin, and must have fallen at that place. No blame can be attached to any one for this unfortunate occurrence.

B. F. PRESCOTT,

For the Board.

ACCIDENT AT EAST KINGSTON. — CLARENCE ELLIS KILLED.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, September, 1890.

Hearing at Dover September 1, 1890.

Witnesses : William Murray, engineer ; Arthur Parsons, fireman ; and Frank Tilton, conductor.

Clarence Ellis, a brakeman on the Western division of the Boston & Maine Railroad, was instantly killed at East Kingston on the 17th day of August, 1890, at 10.35 o'clock P. M. The train on which Ellis was serving as brakeman was an extra ice train which was running from Dover to Boston. The train was somewhat long

and heavily loaded. When it approached East Kingston and was going up a considerable grade near the station, it became stalled, which rendered it necessary to divide the train and haul it over the grade in two sections. The train was divided by the direction of the conductor, and fourteen cars were first taken over and placed upon a side track near the station. Upon this section of the train were the conductor and Mr. Ellis. Two brakemen were left with the other section, which stood upon the main track, to take care of it and watch the road while the locomotive was absent. It was a very dark night and there had been some rain. After the switch was set by the conductor, the forward portion of the train commenced backing slowly upon the side track. Ellis was upon the first or second car from the locomotive and gave the motions for movement by his lantern. After the train was in and had cleared the main track the engineer heard a sharp scream ; he at once stopped his locomotive and went back and found Ellis near the second pair of trucks on the head end of the forward car with his head completely severed from his body. The body was on the inside of the rails while his head was upon the outside. No one saw him fall, and no one could tell exactly how it occurred. The inference given was that he was preparing to pull the pin between the car and locomotive, and while attempting to do so in some way lost his footing and fell in such a manner as to cause the fatal accident.

It was his duty to pull the pin so that the locomotive could go after the rest of the train. The conductor was attending to the switches to see that everything was right there and did not see Ellis after he left him in charge of the front section. The train had almost or quite stopped, and could have moved but a very few feet after Ellis fell.

This was Ellis's first trip on this train, although he had had experience before in railroading. He attended to all his duties well from Dover to East Kingston, and appeared to be a young man of excellent habits. The station agent was at once notified, and the body was carried to the depot, where proper authorities took it in charge and delivered it to his friends. There was no evidence but that the train was handled carefully, and was doing no unusual or dangerous work. His death was one of those unfortunate occurrences which happen upon our railroads, where no fault can be attached to any one who has the management or handling of the trains.

B. F. PRESCOTT,

For the Board.

ACCIDENT ON BARTLETT & ALBANY RAILROAD.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, September, 1890.

Witnesses: Wilber D. Sawyer, superintendent of the road, and Fred C. Hobson.

Charles Black, of Limington, Me., was fatally injured on the Bartlett & Albany Railroad, August 11. The circumstances under which he was injured, as given in evidence, are as follows: On the day of the accident Wilber D. Sawyer, superintendent of the road, went from Bartlett to a siding on the road with two sets of logging trucks and a locomotive. At this siding logs are loaded. When the train reached this siding or station, it was stopped upon the main line. Fred C. Hobson and Charles Black were there at work. Hobson was asked if he would let the trucks in on the side track. He replied that he would, and with Black proceeded to do it. The pin was pulled between the two sets of trucks by Hobson, in order to place the first set near a pile of logs. It was supposed that the brake on the rear trucks was properly set, and that it would remain stationary. Mr. Hobson got upon the forward set of trucks with the intention of stopping it when it reached the proper place for loading. Mr. Black stepped in behind this pair of trucks for the purpose of taking charge of the other when he received orders to do so from Hobson. It appears that both were watching the engine to see if it had passed over the switch and was far enough to clear the cars. Hobson turned round to give the order, and in a moment the car which was supposed to be stationary struck Mr. Black and badly crushed him. He was at once reached by Hobson, who gave the alarm. The locomotive was turned as quickly as possible and Mr. Black was conveyed to Bartlett, where a physician was summoned. He was then placed on a Maine Central train for the purpose of taking him to the Maine General Hospital, in Portland. The physician from Bartlett and Mr. Hobson accompanied him. He failed so rapidly on the journey, it was thought he could not reach Portland alive, so both stopped with him at Steep Falls station, his home, where he died soon after. From the evidence it does not seem that any one was to blame. He was hit by this set of trucks which he was intending to control, while he was looking at the engine.

B. F. PRESCOTT,

For the Board.

FATAL ACCIDENT AT NASHUA. — DEATH OF MISS ASINATH CLARK.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, October, 1890.

Witnesses: Alfreedo Gaut, engineer; Lewis A. Davison, fireman; Ira L. Humphrey, yard conductor; and Frank Barr, agent.

On the evening of the 4th of September, 1890, at about 7.35 o'clock, Miss Asinath Clark, of Nashua, was instantly killed by a locomotive on the Worcester, Nashua & Portland division of the Boston & Maine Railroad, while crossing the track at Spruce street. From the evidence given at the hearing it appeared that Miss Clark was about seventy-five years of age and was hard of hearing; that she had been visiting friends in the city and was returning home. The locomotive No. 231, with no cars attached, and without a brakeman, was backing towards Main street to get coal, and the engineer testified that he was to receive orders for going to Rochester. He said he was running at six or seven miles an hour, and that it was very dark. The bell was constantly ringing while crossing this and other streets. The engineer testified that he kept a lookout while the locomotive was in motion, and could see 40 or 50 feet in front of the tender, but did not discover any person, and did not know any accident had happened until he had stopped and was taking coal and waiting for orders, when some one stepped on to the locomotive and said they had killed a woman. The testimony of the fireman was to the same import as that of the engineer, and he testified that he rang the bell while crossing Spruce and other streets. Mr. Ira L. Humphrey, the yard conductor, while going toward the coal shed, found the body between the rails 30 or 40 feet from Spruce street. It did not appear from the testimony that any one saw her at all until she was found by Mr. Humphrey. Her face was badly bruised, and her lower limbs were across the rail badly crushed, and her shawl several feet from her body. Her body was immediately taken in charge by the proper authorities and everything done that could be.

The engineer testified that he did not sound the whistle at this and other crossings in Nashua, being governed by the following rule of the railroad corporation:

"Rule 14. The use of the whistle as a crossing or station signal will be omitted between Union station and Garden street, Worcester, and between Pine and Hollis streets, Nashua."

The following streets, sixteen in number, are covered by rule 14: Pine, Palm, Ash, Vine, Chestnut, Walnut, Beech, Elm, Garden,

Maine, Spring, Quincy, Mason, Spruce, Worthen, and Hollis, in Nashua.

In 1885, a petition was presented to this Board from citizens of Nashua, asking that whistling be omitted on this road in the compact part of the city, as it was a great annoyance and a great disturbance to the sick. A hearing was had and many appeared in its favor and none against it. On the 21st of November, 1885, the Board made an order, "authorizing the omission of the whistle except on trains leaving each of the two stations, and on entering the city at the first crossing." This was not considered sufficient by the petitioners. The Board then saw no objection to omitting the whistle "where flagmen are employed or gates are in use." The Board then said in their report, "Nor can we see adequate reason for retaining the whistle after 9 o'clock at night and before 6 o'clock in the morning, when its use does disturb the community and gives distress to the sick."

After a full examination the Board *ordered*, that the warning whistle at all crossings on the Worcester, Nashua & Portland division of the Boston & Maine Railroad, in the compact part of the city of Nashua, be omitted between 9 o'clock at night and 6 o'clock in the morning; that it be omitted at all crossings where a flagman is employed or gates are in use, and that it be continued on all trains entering the city at the first crossing, and at the first unprotected crossing on leaving each station.

This order has never been revoked. There are no gates or flagmen at several of the crossings covered by rule 14, and the Spruce-street crossing is included in this number. The rule of the corporation has not been made to comply with the order of the Board, which was made in July, 1886, and its attention is called to that fact.

The life of this lady might or might not have been saved if the whistle had been sounded, but if it had been sounded the requirements of the statute and the order of this Board would have been complied with, and no blame could have rested with the corporation. In a city like Nashua, where so many streets are crossed at grade, the greatest care should be exercised by the railroad corporation and its employés to prevent accidents which are liable to happen at almost any moment. In this instance those handling the locomotive used care, as appeared from the testimony, and no blame can be attached to them, as they were acting under a rule which was defective, and the accident happened before 9 o'clock in the evening, after which the whistle could be omitted.

B. F. PRESCOTT,
For the Board.

DEATH OF PETER J. WELCH.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, October 13, 1890.

Investigation at Concord, October 13.

Witnesses: J. E. Rand, Joseph H. Smart, William Lane, Michael Leary, H. P. Davis, James Fitzgerald, of Concord.

As freight train No. 19 upon the Concord division of the Boston & Maine Railroad was nearing Pettengill's crossing, in Concord, about 2 o'clock A. M., August 14, the engineer felt a jar caused by the wheels passing over some object. Having reached the yard a short distance below, he informed others that he had run over something, and with them returned to ascertain what it was. It proved to be Peter J. Welch, whose lifeless body lay across the rail cut nearly in two by the wheels that had passed over it. Mr. Welch was a brakeman in the employ of the road, and should have left Concord upon the freight train that went north at 11.30 and met the one that run over him at North Boscawen. Some time before this train started, he was about the yard badly intoxicated, and the conductor informed the night yardmaster, Mr. Fitzgerald, that he was in no condition to attend to his duties and told him to take care of him. This Mr. Fitzgerald attempted to do, first by trying to induce him to get into the saloon car No. 2 and be carried to his home, and when he refused to do this, by putting him into the signal-house and cautioning the trainmen in the yard not to run over him. He appears to have been very willful and unmanageable, and about 1 o'clock he escaped from the signal-house where he had been left and disappeared. Nothing more was seen of him until his body was found upon the track, but he undoubtedly started to walk up the road and fell or lay down across the rail, where he remained in a stupor until the locomotive passed over him. His death is clearly the result of his intoxication.

H. M. PUTNEY,

For the Board.

FATAL ACCIDENT NEAR WEST LEBANON. — GEORGE K. GUAY KILLED.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, October 13, 1890.

Investigation at Concord, October 13.

Witnesses: John J. Hanson, brakeman; J. F. Cook, conductor; Levi C. Wood, engine dispatcher; Charles B. Drake, physician; Edwin M. Varney, messenger boy; Thomas McDonell, engine driver; Andrew J. Sargent, fireman; W. E. Marston, conductor on another freight train.

On the 12th day of September, 1890, George K. Guay, a brakeman on the Northern division of the Boston & Maine Railroad, was fatally injured, and died from his injuries a few hours after the accident. The accident occurred at 10.55 o'clock P. M., near West Lebanon station. Mr. Guay was on freight train No. 21, which was going from West Lebanon to Concord. As soon as the train started he got upon the locomotive and remained there a very short space of time; he had his lantern in his hand lighted, as the night was very dark. He was seen by the engineer and fireman to go over the coal on the tender and climb upon a Canada Pacific car, which was the head car on a train of fourteen. The conductor and other brakeman went to the rear end of the train, supposing that Guay was on the locomotive or forward part of the train. When the train reached Lebanon, Guay's lantern was discovered, tipped over but still lighted, on the rear end of the first car. Search was made, but Guay could not be found. A telegram was at once sent to West Lebanon, stating the fact and ordering a search to be made there. He was found near an overhead bridge near the West Lebanon station, and about eighty feet from it, in an unconscious condition and frightfully mangled in his lower limbs, with severe bruises about his head and shoulders. He evidently had crawled away from the main track a few feet from the point where the wheels ran over him. His shoe and pieces of flesh were found sixty feet away from his body. The train was going slowly at the time of the accident. As soon as found, he was carried to the station, and from there to a private house. A physician was at once summoned, who made a careful examination, and came to the conclusion that his injuries must prove fatal in a very short time. He died at 1.30.

The testimony and opinions given by the many witnesses as to the way in which the accident happened were conflicting. Some were

of opinion that he hit the bridge when passing under it, and was knocked off the car, while others thought he must have made a misstep while attempting to pass from one car to another, and fallen between them. An examination of the bridge was made, and no mark whatever was found which would indicate that he hit it, as is usually the case where a person comes in contact with one. The warning was found to be in good order on the north side of the bridge, and if standing up he must have hit it. It would seem from the nearness to the bridge where he was found, that his head must have come in contact with it and he was knocked down. The bridge is not high enough to allow a man of common height to go under it standing erect on a high car. The physician testified that the contusion on his head would have stunned him whether he hit the bridge or any other object, but if he had not received other injuries he might have recovered from that.

One other person years ago was killed at this same bridge. If possible, this bridge should be raised, in order to prevent another accident. Accidents of this kind are constantly happening in the State at bridges that are too low to allow men to stand erect upon the cars where they are at work in the discharge of their duties.

B. F. PRESCOTT,

For the Board.

DEATH OF PETER FREETO.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, November 10, 1890.

Peter Freeto, a sectionman on the Concord & Montreal Railroad, as he was about to commence the work of the day on the road near Martin's Ferry station, at 6.45 A. M., September 24, 1890, was struck by passenger train No. 50, southbound, and instantly killed.

Immediately preceding the accident, the deceased, with other sectionmen, while at the car-house about one hundred and twenty feet south of the station, was requested by Charles H. Johnson, the section foreman, to go a short distance southerly on the road, where they were to put in some ties; and the deceased and Nelson Chase, one of the sectionmen with him, started down the track, Mr. Chase crossing over and taking the up track while Mr. Freeto took and remained on the down track, the one on which train No. 50 was

coming, and was traveling upon that track when struck and killed. The engine whistled about one fourth of a mile north of the station, and a danger signal was given just before the deceased was struck. Mr. Freeto apparently did not hear the first whistle, and although Mr. Chase, when he noticed that Freeto was evidently unconscious of the train's presence, called out to him to leave the track, both this admonition and the danger signal came too late, as his attempt to leave the track was unsuccessful.

The engineer testified that as Freeto traveled down the track, he was apparently meditating and unaware of the train's approach. The train was a few minutes late, and going at a higher rate of speed than usual. The train was stopped as soon as possible, but it could not be stopped in season to save the deceased.

Mr. Freeto was about thirty years old, and had been at work for this corporation on this section since May last. He was a sober, industrious man.

This accident was manifestly due to the fact that Mr. Freeto was unaware of the train's approach; possibly he supposed that it had gone south on time. The testimony before the commission disclosed no want of reasonable and proper conduct on the part of the trainmen or the other sectionmen which contributed to this unfortunate accident.

The witnesses who testified before the Board were Charles H. Johnson, the section foreman; Nelson Chase and Joseph Freeto, two other sectionmen; George B. Randall, the engineer; George L. Conant, the fireman; and W. S. Keniston, the brakeman.

JOHN M. MITCHELL,

For the Board.

DEATH OF ERNEST A. ROBINSON.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, November 10, 1890.

Ernest A. Robinson, a brakeman, while coupling cars at Nashua, October 11, 1890, at 3.45 A. M., on the Worcester, Nashua & Portland division on the Boston & Maine Railroad, sustained injuries from which he died about 11 A. M. on the same day,

No one witnessed the accident. The train on which he was at work was doing shifting, and when injured he was in the line of

duty. During the day Mr. Robinson acted as switchman, while at night, when he labored, he did special work, such as he was engaged in when injured. He was about thirty years old, and so far as disclosed by the evidence, was a reasonably prudent and careful man.

The witnesses who testified were C. E. Chamberlin, the engineer of the shifting-train; W. F. Smith, Martin Hickey, and James Murphy, who were at work either on the train or in the yard at the time of the accident.

JOHN M. MITCHELL,

For the Board.

DEATH OF JAMES HOWARD.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, November 10, 1890.

Investigation at Nashua, November 10.

Witnesses: John Nealand and Daniel W. Wentworth, of Portland; Charles E. Goodwin, of Great Falls; and C. O. Roberts, of Malden, Mass.

James Howard, a trackman in the employ of the Boston & Maine Railroad, was struck by an engine and instantly killed in the railroad yard at Salmon Falls, October 10. Mr. Howard was one of an extra crew employed in repairing the roadway, and a few moments before the accident was conversing with a fellow workman who was at work in the ditch near the switch. He left this companion and started to walk up the track to his own work a short distance away. He walked at first in the ditch, then stepped upon the ends of the ties, but kept outside the rails, and the engineer who saw him a fourth of a mile away supposed he was aware of the approach of the train and so made no attempt to check it until an instant before he was hit. The whistle for the station was blown as usual, but it evidently did not attract Mr. Howard's attention, and he undoubtedly was passing along without being aware that there was a train in the vicinity. His death was due to this inadvertence on his part, and we do not see how any one else can be held responsible for it.

H. M. PUTNEY,

For the Board.

DEATH OF JOHN WELCH.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, December 1, 1890.

Witnesses: H. D. Rowe, Newburyport, Mass., Howard T. Wyatt, Somerville, Mass., H. A. Blunt, Boston, Mass.

John Welch, a laboring man who resided in Biddeford, Maine, but had been at work during the summer at Madbury and Great Falls, was in Dover on the afternoon of November 5. So far as can be ascertained he was last seen alive in the vicinity of the passenger station in that city at about 8 o'clock on the evening of that day, when he informed an acquaintance that he was going home. About 4 o'clock the next morning, as freight train No. 60 from Boston was switching in upon the siding between the freight-house and the bridge, the conductor, H. D. Rowe, discovered an object upon the main track, which upon examination proved to be the headless body of Welch. The body was cold and the clothing covered with frost, showing that it had lain there several hours. It was upon the track upon which No. 60 had just passed up towards the bridge, but all the evidence goes to show that it was not touched by that train and that it was run over, as it lay with the head across the rail, by some train that had passed during the night. There was a heavy frosty mist in the air during the night and morning, which may have prevented him from being seen by the engineers or firemen who had passed over him. He was clearly upon the track without right, and the probability is that he was sleeping there when struck and killed.

H. M. PUTNEY,
For the Board.

DEATH OF CHARLES J. EDGERLY.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, December 1, 1890.

In the evening of November 22, 1890, at about 5.47 o'clock, Charle J. Edgerly, of Dover, was lying upon the track of the Union Street Railroad, upon which electric cars are run between

Dover and Somersworth. The point where he was discovered was upon a curve in the road in front of the Mound House, between the city of Dover and the village of Great Falls. He was first discovered by Frank J. Cole, an electrician, who was on that trip acting as motor man, and was only about thirty feet from him when discovered. The car was running about six miles an hour. The brakes were applied at once, the motor was shut off, as it had been running without power on a down grade. The motor was not reversed for want of time, but everything was done that could be before Edgerly was struck by the car. It was at that time of day when it is very difficult to distinguish an object situated as he was upon the track. The fender or life guard hit him upon the head and crushed his skull. Power was applied and the car was propelled about twice its length. The motor man and conductor went back and removed him from the track and found that he was cold. The proper authorities took charge of the body. During the day Edgerly had been removed from a car, as he was smoking and was in a bad condition of intoxication. People saw him upon the road who noticed the unsteadiness of his step and intoxicated condition. When removed from the car in which he was smoking and in which there were other passengers, his language was abusive and profane. From the position in which he was first discovered upon the track, and the coldness of his flesh as soon as he was reached after the car struck him, it is not certain but that he might have fallen and been killed by the fall upon the rail, but on this point there was no positive evidence.

B. F. PRESCOTT,
For the Board.

DEATH OF WILLIAM SHAW.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, December 1, 1890.

Witnesses: Henry Stevenson, Emery Adelle, and Irving Gleason, of Portland, Maine, and W. H. Webb, of Bartlett.

William Shaw, of Sebago Lake, Maine, a young man of excellent character, and an active, faithful, and competent brakeman pon the Maine Central Railroad, was killed while uncoupling cars

in the yard at North Conway, August 26. A few days before, as a heavy freight train was passing Redstone station, a short distance from North Conway, the bolts which fastened a draw-bar to one of the cars in the train broke and the bar pulled out. This car, which was loaded with general merchandise, and the next one to it, which was loaded with iron, were then chained together by the conductor, Henry Stevenson, and Mr. Shaw, and the break in the train having been mended in this way, the two cars were taken to Conway, which was their destination, and left to be unloaded. On the morning of the accident there was considerable shifting to be done in the yard, and after talking it over Stevenson and Shaw arranged to do it so as to avoid the necessity of taking off the chain which connected the two cars previously left there until the shifting had been done, when they proposed to hitch to the iron car, cut it from the other, and take it back to Redstone. From these facts it appears that Mr. Shaw was fully aware of the nature of the coupling between these two cars and must have known that with a chain supplying the place of a draw-bar there was nothing to prevent their running so close together as to crush a man who was between them; but for some reason, when the other shifting had been done and the time had arrived to cut these two cars apart by unhitching the chain, he stepped between them just as the engineer by reversing his engine in order to slack up caused them to come together, and he was fatally crushed between them. No one ordered him to go between the cars, no one saw him go, and it is not known why he went, knowing as he did that no man could live there if the cars were thrown together, but he probably did it to save the time which it would have taken to bring the train to a full stop and crawl under the car to unhitch the chain. None of his fellow-workmen can be held responsible for his death.

The car from which the draw-bar was pulled belongs to the Maine Central road, and was of the ordinary box pattern used upon that road. It had done service for several years and was probably as sound and strong as many others which are daily run over our roads, but if it had been sound enough and strong enough for the service to which it was assigned Mr. Shaw would not have been killed.

HENRY M. PUTNEY,

For the Board.

DEATH OF DANIEL SULLIVAN.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, December 1, 1890.

November 25, 1890, at 1.20 o'clock P. M., Daniel Sullivan, a coupler in the Concord & Montreal Railroad yard, while off duty, was felled to the ground, run over, and instantly killed by a backing freight car. The deceased had been in the employ of the Concord & Montreal Railroad, as a coupler, for six days, and during that time, except on the day of the fatal accident, had been an industrious, faithful, and sober man. On the morning of the day of the accident he began work at the usual hour and did his work properly until about 10.30 A. M., when W. L. Ryford, the yardmaster, discovered that he was so much under the influence of liquor that he was unfit for labor, and that it was unsafe for him to be in the yard where so many cars were in motion. He was requested by Mr. Ryford to leave the yard, and he did so soon after. In the afternoon, soon after 1 o'clock, he reappeared in the yard and in a more intoxicated condition than during the forenoon. He was again directed by Mr. Ryford to leave the yard; and Mr. Ryford requested him to go into the "Couplers' shanty," a small building by the track near the place where he was standing. This direction he obeyed to the extent of going to the "shanty" and sitting upon the steps. He sat down but a few moments. As he was sitting upon the "shanty" steps the yardmen were making up a train; to make up this train they backed a freight car loaded with lumber by the "shanty," and as they did so he left the steps, went to the rear of the car, apparently to get on, or go across the track by it; and while in the act of either trying to get on the rear end of the car, or cross the track in rear of it, his foot was caught between a guard rail and the main rail and he was thrown upon the track, crushed, his face mangled beyond recognition, and he died instantly. The car that ran over him was the rear one of the train; it was moving slowly at the time and stopped as soon as possible.

No blame can reasonably be attached to either the yard or train men for this accident. The accident, according to the testimony, was undoubtedly due to Mr. Sullivan's condition, produced by drinking to excess intoxicating liquors, furnished him, it was said, by

parties accompanying a freight car, then in the yard, on its way from Newport, Vt., to Boston.

The witnesses who testified before the commissioners were Dr. Conn, the attending physician; W. L. Ryford, the yardmaster; W. H. Mayo, a switchman; C. R. Conant, yard conductor; and C. E. Bryant, a coupler.

JOHN M. MITCHELL,
For the Board.

DEATH OF CORNELIUS F. LYON.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, December 6, 1890.

Witnesses: H. F. Eastman, conductor, and Fred Rahn, engineer, Charlestown, Mass.; J. P. Nowell, fireman, Somerville, Mass.

An extra freight train of thirty-three cars left Boston at 10.27 o'clock A. M., on the Eastern division of the Boston & Maine Railroad, on the 16th day of November, 1890. When the train reached Newburyport, it slackened its speed and ran quite slowly through the city. While at this low rate of speed, Lyon, who was about fifteen years old, and two other boys of about the same age, boarded the train with a plan, as they said, of getting a ride to Portsmouth. The two companions of Lyon succeeded in getting into the same car, but Lyon got into another, and from Newburyport to Greenland was alone. When the train approached Greenland it slacked up again in order to allow the conductor to register. At this point Lyon got out of the car he was in and made the attempt to join his companions. The train began to increase its speed and Lyon failed to enter the car. He fell and the wheels ran over and killed him instantly. The rear brakeman discovered the accident and at once went forward and informed the conductor, which required some time, as the cars which composed the train were of different kinds and loaded with a variety of freight. As soon as the train reached Portsmouth a coroner and some policemen were summoned, and the locomotive, with them and the trainmen, returned to Greenland where they found Lyon by the side of the track. His remains were conveyed to Portsmouth and properly cared for by the direc-

tion of the officers of the road and sent to his home in Newburyport. No one of the men running this extra train saw the boys get on board or saw the accident, but his two companions, looking out from the car in which they were riding, saw him when he lost his hold and fell under. This adds another to the list of sad accidents upon the railroads where the whole fault is with the trespasser and not with the corporation.

B. F. PRESCOTT,

For the Board.

AWARDS AND DECISIONS.

AWARDS FOR LAND DAMAGES.

Since the publication of the annual report for 1889, a large number of awards for land damages have been made by this Board, the selectmen of towns, and the mayor and aldermen of cities where such lands were located, sitting as joint boards for the appraisal of damages. The names of the railroad corporations which have taken land, the names of the cities and towns where such lands are located, the names of the parties to whom awards have been made, and the amount of each award are here given.

On petition of the Mount Washington Railway Company, for land taken on the summit of Mount Washington:

To Ebenezer S. Coe and David Pingree, $2,750. September 27, 1889.

On petition of the Franklin & Tilton Railroad:

In the Town of Franklin. — John C. Smith, $825; John L. Kelley (woodland), $50; Bartlett W. Clough, $850; Morrill D. Scribner, $400; Michael Cunningham, $625; Deborah A. Pettingill, $350; Sarah J. A. Wallace, $375; Joseph and Mary Rayno, $275; Hannah Dineen, $400; Daniel A. George, $575; heirs of John Galligan, $675; Royal Stone, $900; James T. and Isabelle F. Ayles, $375; Patrick Dolan, $900; Charles C. Paige, $100; Haynes & Kidder, $558; John Keizer, $1; Walter S. Whittier, $1,800; Annie E. Igo, $1,440; Aaron Woodman, Phebe A. Woodman, Huldah Wadleigh, $200; John A. Lang, $50; John L. Kelley (in village), $1,800. April 16, 1890.

On petition of the Monadnock Railroad Company:

In Peterborough. — James F. Dearborn, $4,500; Henry and Mary L. Childs, $3,000. April 28, 1890.

On petition of the Concord & Montreal Railroad:

In Manchester. — Waterman Smith, $930; Swift & Co., $25. July 28, 1890.

On petition of the Upper Coos Railroad:

In the Town of Stratford. — Atlantic & St. Lawrence Railroad, $225; George E. Twohey, $450; Clark Stevens, $10; Jane H. Baldwin, $30; William B. Schoff, $413; Edmund W. Baldwin, $425; Cyrus Hartshorn, $175; Fred A. Hinman, $185; Sabine Welcome for Cyrus Hartshorn (party in interest), $125; Edward F. Buckman, $300; John I. Crown, $125; Francis W. and H. W. Curtis, $270; William Roberts, $230; heirs of Isaac Johnson, Miss Jennie Johnson and Mrs. John I. Crown, $395; Prescott P. Mason, $150; Seth R. Chase, $591; Laura M. Johnson, $225; and to Henry W. Curtis (party in interest), $90; J. T. and T. Connery, $72; Atlantic & St. Lawrence Railroad, $300. September 23, 1890.

In the Town of Lancaster. — Samuel F. Southard, $61; Frank Smith & Co., $55.75; J. Austin Smith, $72.25; Mrs. Sally H. Rosebrook, $50; Charles B. Allen, $137; Mrs. Dennis Stanley, $108; Concord & Montreal Railroad, $1; Mrs. George A. Gardner, $10; Charles O. Baker, $110; J. Sumner Smith, $70; Dennis Stanley, $1; Fred Gonyea, $61; Mrs. Elizabeth Gonyea, $54; Joseph Gochee, $50; Kilkenny Railroad, $1; J. Sumner Smith, $113; Jacob Benton, $228; Horace F. Holton, $1; Mrs. Josiah Roberts, $1; Mrs. Mary E. Hunking, $260; Mrs. John Moore, $415; J. A. Smith, $145; David Parks, $257; John Kenney, $382; Mrs. Dennis Leonard, $360; Mrs. Robert Eglington, $290; town of Lancaster, $1; Horace Dow, $400; Henry Young, $150; Patrick Hurley, $225; Andrew Murphy, $225; James Webber, $250; William T. Jones, $460; Richard Hovey, $25; N. H. Richardson & Sons, $637; Leroy Stalbird, $105; J. H. Spaulding, $25; George W. Anderson (paper mill), $50; Sarah M. Bothell, $325; Loren B. Porter, $300; Ralph Stone, $1; Enoch F. Connor, $250; James W. Weeks, $200; Edward Spaulding, $100; Irving Kellum, $170; Shepard A. Knight, $400; Mrs. Alden Lewis, $25; Cyrus Burley, $365; Alvah Remick, $200; Sylvanus Holmes, $400; Lorenzo Gray, $25. September 25, 1890.

In the Town of Jefferson. — Wells R. Evans, $354; John T. Bedell, $25; Charles B. Bishop, $72; Eliza A. Beaton, $70; J. H. Knott, $100; Mrs. B. Frank Blodgett, $177; James H. Grant, $15; J. M. Morse, $275; Amasa Holmes, $125; Selden C. Howe, $361; Albert D. Howe, $225; Mrs. Jane E. Howe, $180; Foster & Woodman, $100; Brown Lumber Co., $100; George W. Libbey, $38; L. T. Hazen, $1.

In the Town of Whitefield. — Louis T. Hazen, $1,100. September 25, 1890.

On the petition of the Concord & Montreal Railroad:

In the Town of Laconia. — Mary J. Labe, $3,300. November 6, 1890.

GRADE CROSSINGS UPON HIGHWAYS.

Many applications have been made by several railroads in the State to obtain the written permission from this Board, as is required by law, to cross certain highways at grade, to change the location of some highways, also to raise or lower them where it was not feasible to cross such highways in any other manner. The cities and towns in which such highways are located and the names of such streets and highways are hereafter given. In every instance the permission of the mayor and aldermen of the cities and the selectmen of the towns was obtained before application was made to this Board for their written consent. In a large number of the applications personal examination of the crossings was made by this Board in connection with the selectmen of the several towns.

Upon the petition of the Suncook Valley Extension Railroad to cross certain highways at grade in the towns of Pittsfield and Barnstead, dated October 8, 1889, a hearing and examination were had, and permission in writing was given said railroad to cross at grade the road near the east end of the passenger station and the Tilton Hill road in Pittsfield, the Old Province road, the Parade and Bunker roads at Barnstead Parade, and the highway at Barnstead Center.

The Lake Shore Railroad, on the 16th day of November, 1890, asked permission to cross certain highways at grade, which was granted after a hearing on the application. The following s a description of the crossings:

In the Town of Gilford. — Gold street, so called, in the village of Lake Village, at a point near Black brook; the highway leading from Lake Village to Gilford Village at a point near the house of Charles Davis; a cross road near the house of Henry Blaisdell; the highway leading to the Weirs at a point near the house of George Saunders; the highway leading from the main road near Charles Boynton's house to the lake.

In the Town of Alton. — The main highway leading from Lake Village to Alton Bay at a point about a mile from West Alton; the same highway a little south of Minze brook; the same highway at a point about a mile from the station called Saint's Rest; a cross road near Loon pond; the highway first named at a point south of Loon Cove.

The Tilton & Belmont Railroad asked permission to cross two highways in the town of Belmont, at grade, on the 9th day of November, 1889, and written permission was given it to do so. The location and description of the two highways are not defined in the petition.

The Maine Central Railroad, lessee of the Portland & Ogdensburg Railroad, on the 2d of December, 1889, petitioned this Board to cross certain highways at grade, in the construction of its road from Fabyan's, in the town of Carroll, to Scott's Junction, in the town of Dalton. The towns in which these crossings are located are Carroll, Whitefield, and Dalton.

In the Town of Carroll. — The highway between the Fabyan House and the White Mountain House; the highway just southwest of the White Mountain House; the highway between the Twin Mountain House and the residence of Thomas Monahan; the highway between the dwelling-house of Ernest E. Howe and the dwelling-house of Jonas Howe and N. S. Howe; at the highway, subject to gates and bars, leading from the road leading from Carroll town house to Whitefield Village to the dwelling-house of Charles Glines; across the Cherry Mountain road, so called, near the westerly line of the farm occupied by C. C. Stoddard.

In the Town of Whitefield. — Across the road leading from Hazen's to Jefferson Meadows; across the highway leading from Hazen's to Whitefield Village; across the highway leading from Whitefield Village to Jefferson to J. Q. A. Sartwell's house; across the highway leading from Whitefield Village to Lancaster, in front of the town house; across the highway leading from Whitefield Village to Dalton, near the dwelling-house of N. W. Libbey in Whitefield Village.

In the Town of Dalton. — Across the highway leading from near the house of J. T. Smith and Abraham Hubbard westerly across John's river to Brown's Mills; across the highway leading from Whitefield Village to Scott's Junction, at a point southerly of the dwelling-house of J. L. Bell, and at a point northerly of the dwelling-house of J. D. Colby.

The Franklin & Tilton Railroad on the 18th day of April, 1890, asked permission to lower Prospect street and to raise School street in the village of East Franklin, for the purpose of avoiding crossings at grade, and the permission of the Board was given April 29.

May 21, 1890, the Worcester, Nashua & Rochester Railroad Company asked permission to cross a highway near the station in Epping with a side track to accommodate certain brick-yards in that locality, and the written permission of the Board was given.

On July 23, 1890, permission was given to the Upper Coos Railroad, in its extension from North Stratford to a junction with the Portland & Ogdensburg division of the Boston & Maine Railroad in the town of Carroll, to cross at grade, and to change certain highways as hereinafter described:

In the Town of Stratford. — The highway leading from North Stratford southerly down the Connecticut river, at a point northwesterly from the dwelling-house of Mrs. Jane H. Baldin, also the road leading from the house of John I. Crown to what is known as Beattie's.

In the Town of Lancaster. — The highway known as the River road, near the farmhouse of Mrs. Alexander M. Beattie; the highway leading from the River road to Page hill; the highway leading easterly from Summer street, between the land of Elizabeth Gonyea and the land of Joseph Gochee; the highway leading easterly from said Summer street to the dwelling of Henry Young, at a point between the dwelling-house of James Webber and the dwelling-house of Henry Young; the highway in Lancaster Village known as High street; the highway in Lancaster Village known as Bunker Hill avenue; the highway in Lancaster Village known as Middle street; the highway in Lancaster Village known as Mechanic street.

In the Town of Jefferson. — The highway leading from Lancaster village to Jefferson Mills, at a point between the dwelling-house of John Bedel and the house occupied by Lorenzo Gray; the highway leading from the Old Turnpike road westerly to the house of Moses Kimball; the highway leading from Jefferson Mills via the Old Turnpike to Jefferson Meadows, also at two points in the uncleared land owned by Foster & Woodman; also the highway known as the Knott Hole road, and the highway leading from Hazen's Junction to Jefferson Meadows.

The diversions of highways in the petition of the Upper Coos Railroad were described as follows: At a point in Stratford between the dwelling-house of Dr. D. O. Rowell and the dwelling-house of Annie L. Thompson, and in the town of Jefferson at two points on the line of the Old Turnpike, on uncleared land owned by Foster & Woodman.

The Concord & Montreal Railroad asked permission, which was granted, on the 3d day of September, 1890, to cross by a side track the following described streets and avenue in the city of Nashua: Marshall street, Harbor avenue, and Tyler street. This side track was constructed from the main line of the Nashua, Acton & Boston Railroad to the Nashua Iron Company's yard.

The Franklin & Tilton Railroad, on the 3d day of October, 1890, asked permission to lower Winnipiseogee street in Franklin at its intersection with the railroad of said corporation in order to avoid a grade crossing, and to alter the course of High and Russell streets in order that the railroad could pass them without crossing. A hearing was had on the petition on the 13th day of October, and the prayer of the petition was granted.

APPLICATION FOR FARM CROSSING IN DERRY.

Mr. Thaddeus Wheeler, of Derry, on the 17th day of December, 1889, sent a communication to the Board asking that a farm crossing over the Worcester, Nashua & Rochester Railroad might be made so that he could enter his land on the west side of the railroad. An examination of the place was made by a member of the Board in company with Mr. Wheeler, and afterwards the attention of the officers of the road was called to the subject, and a crossing was constructed suitable for crossing with loads, and no further hearing or action was taken.

PETITION OF THE MANCHESTER STREET RAILWAY

For Permission to Discontinue its Road between Elm an Main Streets.

Hearing at anchester, September 30 and October 5.

Counsel: For the petitioners, Briggs, Bartlett & Jones; for the remonstrants, Burnham & Brown.

In May, 1889, the Manchester Street Railway petitioned the commission to legalize its crossing at grade over the tracks of the Concord Railroad on Bridge street, which had been constructed in defiance of the statute prohibiting such crossings without the consent of the commission. After a lengthy hearing, during which the material facts in regard to the so-called McGregorville branch were fully brought out, the Board dismissed the petition for the want of jurisdiction, holding that when the street railway violated the law

by making the crossing, it went beyond the power of the Board to relieve it of its liability, and must seek the desired legalization at the hands of the Legislature. Subsequently the Legislature passed an act authorizing the railway to discontinue any portion of its road by a vote of its stockholders with the consent of the commission. The petition before us, which follows a vote of the stockholders to discontinue that portion of the McGregorville branch between Elm street and the intersection of Main and Amory streets in West Manchester, with the understanding that the remaining portion from Amory street shall be extended from its southern terminus at Sullivan street to a junction with the main line at Clapp's store, thus giving the people of McGregorville street-car service to and from the main part of the city over Granite bridge instead of over McGregor bridge, is the outcome of that act of the Legislature. At the several hearings that have been had upon the subject these facts have been established:

The McGregorville branch was built in the fall of 1887, and for about a year fifteen-minute trips were made over it to the Elm-street junction. After that, half-hour trips were made until June, 1889, when repairs upon the bridge over the Merrimack by the city compelled the company to withdraw its cars, and the branch has not been operated since. It has never paid, the daily receipts averaging $5.50, while the expenses were at least $10. It is insisted, however, and is doubtless true, that the meager patronage given was largely due to the poor service, and that with clean cars, competent drivers, and an adherence to the time-table it would do much better. The length of the branch is about 4,500 feet. If discontinued between Elm and Main streets and extended to a junction at Clapp's store it will be about 3,450 feet.

The Catholic church upon Wayne street, which is admitted to be the center of population to be served by this branch, is about 7,850 feet from the City Hall by the Granite-street or proposed route, and about 4,900 feet by the Bridge-street or old route. From the same center to the passenger station by the old route is about 7,400 feet, and by the proposed route it is 5,350. The Bridge-street crossing is a very dangerous one and cannot be made otherwise. It is situated on a steep hill, the grade being more than five feet in a hundred. It is a blind crossing, the brick buildings upon either side of Bridge street being so placed that a person going down the hill cannot see the Concord road until he is within less than two hundred feet of it. It includes not only the main tracks of the Concord road but the side track leading through the Stark mill yard to the mills above. It is a point where the trains upon the

steam railway run very rapidly. If from any cause a loaded horse-car should become unmanageable upon the hill between Canal and Elm streets and dash down in front of one of the many trains upon the Concord road no human power could prevent a catastrophe of appalling magnitude, and that this is liable to happen at any time, the experience upon Granite street, where the decline is much more gradual, and where within a few months four horse-cars have left the track and rushed down the hill and into the side of the depot curbing, is proof enough.

The Elm-street junction, from which this branch starts, is upon the brow of the hill, and so situated that while the cars are detached from the horses, as they are at the end of every trip, a gust of wind is liable to send them down the hill and upon this crossing, all of which adds to the dangers incident to all grade crossings.

It is contended by the remonstrants that the crossings upon the Granite-street line are as dangerous as that upon Bridge street. Our judgment is to the contrary, for they are not as blind, upon as steep grade, or where steam cars run rapidly, and it is to be considered that the contemplated improvements by the Concord road at and about its station include the abolition of the grade crossings at that point and the substitution of an overhead driveway for teams and street cars. The duty of this Board is obviously in the direction of promoting such a change rather than in encouraging the multiplication of crossings like these. It is claimed by the officers of the horse railway that they can operate the McGregorville branch from Amory street to Clapp's store much more cheaply and to the better accommodation of the public than they can the branch as now laid upon Bridge street, and their judgment on such a matter is entitled to great weight. If the prayer of the petitioners be not granted, it leaves them in the anomalous position of being unable to discontinue a track which was not legally laid, which they cannot operate without constant violation of law, and which no power can legalize, except the Legislature that will not be in session for more than a year.

In this view of the case the Board is compelled to reaffirm its opinion in answer to the May petition that McGregorville should be given horse-car connection with Elm street by way of Granite street, and not by Bridge street, and the consent of the Board to the discontinuance of that section of the Manchester railway between the intersection of Elm and Bridge streets and the intersection of Amory and Main streets is hereby given.

H. M. PUTNEY,

For the Board.

TOWN OF COLUMBIA *vs.* MAINE CENTRAL RAILROAD.

To the Honorable Board of Railroad Commissioners for the State of New Hampshire:

The town of Columbia, in the county of Coos, and State of New Hampshire, respectfully represents that the Upper Coos Railroad, in constructing its road in said town, located its roadbed and track on and over the public highway in said town near the dwelling-house of George P. Brown, and also near the toll-bridge and between the toll-bridge and the crossing northerly thereof, and along the bank of the Connecticut river, and on and over the highway northerly of said crossing, in said town, in such a manner as to leave the said highway dangerous and unsuitable for the public to travel thereon, causing numerous accidents and injuries to persons traveling there, annoying and menacing said town with lawsuits and liabilities for the injuries occasioned thereby; and that said roadbed and track have been so constructed at the places above mentioned as to leave no feasible route for the construction and maintenance of a suitable and safe highway for the traveling public, all of which can be remedied by a change in the location of said railroad.

The said town of Columbia further alleges that the damages to said town occasioned by appropriating said highway to said railroad have never been waived by said town, nor assessed or paid by said railroad, and no other roadway has been accepted by said town in place of the highway so appropriated by said railroad; that the Maine Central Railroad is now operating said Upper Coos Railroad on and over said highways at the places above mentioned, endangering travelers thereon, and still menacing said town with lawsuits for the injuries occasioned thereby.

Wherefore said town respectfully requests the railroad commissioners to change the location of said railroad, at the places above mentioned, in such a manner as to avoid the danger and peril to travelers on the public highway; and that the said railroad be required to erect and maintain around said places such safeguards as the safety of the town and the welfare of the public may demand.

Dated this 13th day of August, A. D. 1890.

TOWN OF COLUMBIA,

By SAMUEL M. S. SAVORY, *Agent.*

To the Honorable Board of Railroad Commissioners:

In the matter of the town of Columbia *vs.* Maine Central Railroad, the town claims as follows:

That under section 11, chapter 160, General Laws of New Hampshire, any owner, any town, or any corporation having any interest, right, easement, or franchise in any real estate taken by any railroad and appropriated to its own use, and is aggrieved by the location of the railroad in the taking of the same, has a right to petition the commissioners for a change of location any time before the damages are assessed; and that jurisdiction is conferred by said statute on the commissioners to determine the question of grievance. The petition alleges that the highways of the town have been taken by the railroad, that the town is aggrieved thereby, inasmuch as the condition of affairs created imposes a peril and burden that ought not to be borne, and that the damages have never been assessed, satisfied, waived, or paid. Therefore the town claims that the jurisdiction to determine the matter still remains with the railroad commissioners, and that they cannot be divested of their jurisdiction until the damages *are assessed, satisfied, or waived by the town.* The fact that time has intervened is the fault of the railroad as much as of the town; for they have the same right to cause an assessment of damages that the town has, and the railroad could have closed the jurisdiction of the commissioners any time by having such assessment made. They have neglected to do this and are in equal fault with the town, and cannot now claim any advantage therefor.

I do not understand that the petition calls for an assessment of damages for the town; it does ask the commissioners to change the location of the railroad near the dwelling-house of George P. Brown, in Columbia, where it crosses the highway twice, so it will not cross the road at all.

It asks them to change the location of the road at the Columbia bridge so an underpass can be constructed for the public travel on the highway, thereby dispensing with the grade crossing at that point.

It asks the commissioners to restore the old highway at the crossing north of the Columbia bridge and place the railroad west of the same, dispensing with the grade crossing at that point.

The town claims all these changes can easily be made; and this will eliminate all the crossings, leave the railroad dump pierced by only one underpass, and remove all the dangers of which complaint is made. These are the safeguards contemplated.

T. F. JOHNSON, *Attorney for Columbia.*

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, October, 1890.

In this petition the town of Columbia alleges that the Upper Coos Railroad crosses the highway twice near the dwelling-house of George P. Brown, thus endangering the public travel upon the highway and rendering it unsafe and unsuitable for travel.

It is further alleged that the town's damages for such crossings have neither been assessed, paid, or waived. In the prayer of the petition the town requests the commissioners to change the location of the railroad at the crossings, and that the corporation be required to erect and maintain at said crossings "such safeguards as the safety of the town and the welfare of the public may demand."

Although the town, in the prayer of the petition, requests an order for the provision of safeguards at the crossings, we are informed by their counsel that the only point on which the commissioners' action and decision is desired is that relating to a change of the railroad's location at the crossings described in the petition.

The railroad was constructed in the year 1887. These crossings were not authorized by the commissioners, under the provisions of section 6, chapter 98 of the Laws of 1885. The proprietors of the railroad do not now ask for a change of the location of their road, at the points designated in the town's petition, under section 18 of chapter 160 of the General Laws. On such an application, made by the proprietors of the railroad, the power and jurisdiction of the commissioners to change the location and award damages to the parties thereby injured would clearly exist.

Nor is this an application by either the railroad corporation or the town for an assessment of damages for land or franchises taken for a road constructed, but for which damages were not awarded before the construction. In such a case, also, our jurisdiction and power to act on proper notice would be unquestioned, under section 27 of chapter 160 of the General Laws.

But in our opinion, the commissioners have no power to order the change of a railroad's location and a discontinuance of its road except on the application of the railroad proprietors, under section 18 of chapter 160 of the General Laws. The construction of the railroad at the points now objected to was presumably with the express or implied assent of the town and its citizens. Had the town and its citizens not assented it must be assumed that the cor-

poration either would not have built the road or it would have been enjoined from doing so on the application of the town or some of its citizens. The commissioners must act upon the situation as they find it. They find a road constructed and in operation. If the town complains of the operation of the road, or its condition, at the points designated, the commissioners will investigate the causes of complaint assigned and adjudicate the same; but we understand the present application is limited, by the town's counsels, to the request for a change of the road's location; and this request the commissioners hold they have no power to grant, because their jurisdiction does not embrace it.

When a railroad company lays its track upon or across a public highway, it undertakes, by some means, to put the highway in a suitable and passable condition for the travel thereon. But whether the enforcement of this duty be secured by mandamus, or the failure of its performance punished by indictment, or some other legal process be invoked as a remedy to accomplish that end, it implies the possession and exercise of judicial functions not conferred upon the commissioners.

Therefore, that part of the petition relating to a change of the location of the railroad track at the crossing described is dismissed.

JOHN M. MITCHELL,
For the Board.

DIAMOND CROSSINGS UPON RAILROADS.

The following applications have been made by railroads to cross at grade other railroads when it was found impracticable to go over or under them, and written permission has been given by the Board for such crossings:

The Maine Central Railroad, lessee of the Portland & Ogdensburg Railroad, in its petition dated December 2, 1889, asked permission to cross the Whitefield & Jefferson Railroad in the village of Whitefield, south of John's river, and the track of the Concord & Montreal Railroad just southerly of Scott's Junction, in the extension of its road from Fabyan's, in the town of Carroll, to Scott's Junction, in the town of Dalton.

The president of the Whitefield & Jefferson Railroad on December 2, 1889, certified that the grade crossing was satisfactory and constructed in a proper manner, with the necessary signals in good

working order. The superintendent of construction of the Concord & Montreal Railroad, also, under date of January 20, 1890, certified to the same facts as regarded the road.

The Upper Coos Railroad, in July, 1890, petitioned the Board for permission to cross the Atlantic & St. Lawrence Railroad in the town of Stratford, also the Concord & Montreal Railroad and the Kilkenny Railroad in the town of Lancaster, the Whitefield & Jefferson Railroad in the town of Whitefield. The Concord & Montreal Railroad, by its authorized officers, on July 25 gave its consent for the above mentioned crossings.

The petition to cross the Atlantic & St. Lawrence Railroad at grade was opposed by the road, and several hearings were given to the parties interested. The decision of the Board is as follows:

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, October, 1890.

This petition was met by a vigorous protest from the Grand Trunk Railway, which contends that the Upper Coos should not be permitted to cross its track at grade, but should be compelled to so locate and construct its road as to cross upon an overhead pass. The parties were heard upon the site of the proposed crossing at North Stratford and at the office of the Board in Concord. At these hearings the officers and engineers of both roads appeared as witnesses with maps, drawings, estimates, and other testimony, showing the Upper Coos extension as located by its proprietors, the route upon which the remonstrants contend it should be built in order to avoid an overhead crossing, the cost of construction upon both routes, and such other facts as were deemed necessary to a full understanding of the case. It was thus established that the Coos extension has been located parallel with and adjacent to the roadway of the Grand Trunk from a point about 2,750 feet westerly of the proposed crossing to that crossing, and thence upon a nearly straight line to the Connecticut river and into the State of Vermont, the intention being to cross the Grand Trunk at grade, and that at a cost of from $50,000 to $55,000 this location can be so changed as to carry the road around upon the side of the hills situated a few rods back from the Grand Trunk nearly to the crossing, then upon a fill and bridge over the Grand Trunk and about twenty feet above it, and thence upon another fill across the interval to the bridge over the Connecticut. This estimate includes the cost of the overpass crossing and of

two stone underpasses for the use of farmers who own land upon both sides of the new route. The distance by the proposed route from the point where it leaves the original location to the Connecticut is about 5,900 feet, and the steepest grade is forty feet to the mile, against a distance of 5,700 feet and a grade of forty feet to the mile upon the grade crossing route. The proposed fill upon the overhead route is in places twenty-eight feet in height and is more than thirteen all the way from the Grand Trunk to the bridge. The contention on the part of the Grand Trunk is that it is necessary, in order to prevent serious accidents, to avoid crossings at grade; that the law of our State, which prohibits such crossings without the consent of the railroad commission, is a law to prohibit them under such conditions as exist at North Stratford; that the establishment of one there will necessitate an annual expense of at least $2,000 for men to care for it and operate the signals which must be depended upon to render it comparatively safe; and that it will subject them to great expense and delay in running their trains. The answer of the Upper Coos is that it has been the unbroken custom in this State to permit such crossings; that it is unreasonable to prohibit them in sparsely settled sections, where trains are few and traffic is light, and where roads, if built at all, must be built as cheaply as possible; that the danger incident to their use is not great; that as soon as the Upper Coos is completed a union freight and passenger station for the use of the people living in the vicinity, and for the interchange of business by the two roads, should be erected at their intersection; that whoever has charge of this station can also care for the crossing and signals, and that it will be impracticable to give the public this accommodation unless the roads cross at grade. The opinion of the Board is that the danger of trains colliding or otherwise meeting with serious accidents upon diamond crossings, if in compliance with the law they are invariably brought to a stop before reaching such crossing, as it is to be assumed they will be, is not great; that it is no greater, in fact, than that incident to the running of trains upon a fill half a mile in length and varying from thirteen to twenty-eight feet in height. There is, we believe, no instance since the creation of this Board in 1883 in which a fatal accident has occurred upon any of the many diamond crossings in this State, and throughout the country the fatalities are much greater upon grade crossings over highways, in proportion to their number, than upon grade crossings upon railroads. It follows that if a diamond crossing is to be prohibited to make railroad traffic safe, whenever it can be avoided at a cost of $50,000, all grade crossings over highways should be under similar circumstances, and this is utterly impracticable in a country like

Coos county where railroads when constructed at a minimum cost cannot be very profitable enterprises, and where the small number of trains reduces the danger to small proportions.

The proposed crossing is about four miles from North Stratford and about three and one half from Stratford Hollow, the two nearest stations upon the Grand Trunk, and before the laying out of the Upper Coos extension the Board was appealed to to order a station in that vicinity to accommodate many families who, it is stated, could reach it easier than any other. We do not deem this request a very unreasonable one, and when the Upper Coos is completed a union station should be established at the crossing to convene the patrons of the two roads in that vicinity and facilitate the interchange of business between them. Nevertheless, it is equitable that the Upper Coos should, so far as is practicable, save the Grand Trunk from the extra expense incident to the construction and maintenance of a grade crossing.

Therefore permission is granted the Upper Coos to cross the Grand Trunk at grade in the town of Stratford, as requested, upon the condition that said Upper Coos shall construct and maintain such crossing in such manner and with such safety appliances and devices as the Board of Railroad Commissioners of the State of New Hampshire shall from time to time recommend or approve.

H. M. PUTNEY,

For the Board.

ORDER BY THE BOARD.

The Board, having been requested by the officers of both of the above corporations to make an order in reference to the diamond crossing in the town of Stratford, after a lengthy hearing at Lancaster, on the 20th of October, 1890, issued the following:

"The Board of Commissioners direct that the Upper Coos Railroad shall establish, and it, or its assignees and lessees, maintain such a crossing and signals as are now used upon the Atlantic & St. Lawrence Railroad, between Island Pond, in Vermont, and Portland, Me.; the same to be constructed to the satisfaction of the Board of Railroad Commissioners, and subject to alteration whenever in their judgment the public safety requires change, and such additions and changes as may be ordered by the Board of Railroad Commissioners from time to time to be provided and maintained by and at the expense of said Upper Coos Railroad or its assigns or lessees."

PETITION FOR FLAGMAN AT WILTON.

A petition, signed by Jacob Putnam and 120 others, citizens of Wilton, was presented to the Board asking that a flagman be stationed at a point upon the line of the Peterborough Railroad, so called, where it crosses the highway in said town near what is known as the "Stone mill crossing." Notices were given of the hearing, and a large number of citizens of the town were present at the hearing. The following report was made by the Board :

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, November, 1889.

In the matter of this petition, a view and hearing were had, November 25, 1889. The crossing in question is about a mile north of Wilton Village, over a highway which is much used by people going to and from that village, especially by many farmers who take milk daily to the depot. The railroad crosses the highway at the foot of a wooded hill, and thence runs around this hill in such a manner that a person going west in the highway when a train is going south cannot see the locomotive until he nearly reaches the track. This elevation and the growth upon it also obstruct the sound of the whistle, so that when it is blown eighty rods above the crossing it is not heard by those driving towards the track from Wilton, if the wind is not favorable, and much noise is being made by the milk-cans, which constitute the load of most of the complainants. No person has ever been injured upon this crossing, but several carriages have been wrecked and narrow escapes were testified to by the witnesses called by the counsel for the petitioners.

Four trains pass this point each way daily in the winter and six in the summer. The town has never taken any action in regard to the matter. The crossing is a bad one because of the hill, otherwise it is no worse than most of those in our State. As it is, it is not as dangerous as many others that are to be found in villages and cities where streets that are much traveled cross railways over which trains run much more frequently than between Wilton and Greenfield. In our judgment there are at least one hundred crossings which need to be guarded by gates or flagmen more than this, and the Board cannot go to the extent of recommending the constant employment of a flagman at this point with

out establishing a precedent which, if impartially followed, would impose upon the business of the railways of the State an annual tax of more than fifty thousand dollars. This we do not feel warranted in doing under the circumstances. But a small section of the hill is owned by the railroad corporation, and the Board has no power to authorize it to remove the growth or the soil from that portion which most obstructs the sound of the whistle and prevents trainmen and travelers upon the highway from seeing each other. It is, however, recommended that the regular eighty-rod whistle be repeated when trains going south are about forty rods from the crossing, from which point it can generally be heard without difficulty; and it is believed that with this added warning, the exercise of such vigilance and caution as may reasonably be expected of trainmen and travelers upon the highway, when near crossings of this character, will avert serious accidents in the future, as it always has done since the road was opened.

H. M. PUTNEY,

For the Board.

OBSTRUCTION OF A CARRIAGE AND FOOT WAY IN LAKE VILLAGE.

STATE OF NEW HAMPSHIRE.

IN BOARD OF RAILROAD COMMISSIONERS.

CONCORD, June, 1890.

George H. Robie and Charles D. Robie, citizens of Gilford, on the 25th of April, 1890, presented a petition, stating that the engines and cars of the Lake Shore Railroad obstructed for more than eight minutes at a time a passway to their wharf property in Lake Village, greatly to their inconvenience, and also large numbers of others who had occasion to go upon this route to and from the wharf.

The subject was at once brought to the attention of the officers of the road, and said officers agreed to prevent any further obstruction of said way, except what is absolutely necessary for the transaction of the business of the corporation. With this assurance from the managers of the road no hearing upon the petition was had.

CORRESPONDENCE.

CONCORD, N. H., July 14, 1890.

To the Board of Railroad Commissioners for New Hampshire:

GENTLEMEN, — I am impressed with the notion that there ought to be made by your Board, attended by an engineer of your own selection, a special examination of the Concord & Claremont Railroad.

For several recent years, the traveling public did not know whether the road was being legally operated by the company which, in fact, furnished and run the trains.

What the public did know was that the road was depreciating in the condition of its roadbed and tracks, while the existence of litigation and legislation concerning its legal status was the answer to all requests for better bridges, culverts, ties, rails, and depots.

It now appears as a finality of contention that the Concord & Claremont Railroad belongs to the Northern Railroad, which is lawfully leased with its dependencies for ninety-nine years to the Boston & Maine; that the lessee is relied upon to keep the Concord & Claremont in good condition, and that the Northern Railroad Company is dividing among its stockholders a great surplus, giving one dividend of twenty-five per cent, with more in immediate prospect.

It really seems to me as if, before this surplus is all given to the stockholders, there should be an inquiry whether or not the Northern Railroad and its branches are in that suitable condition for the business to be done over them which the public has the right to require. The Northern Railroad, by leasing itself to the Boston & Maine, has not exonerated itself from liability to the public on account of the condition of its road; and the railroad commissioners, who are the only guardians of the public interest, are bound to the people not to allow the Northern Railroad surplus to disappear until that road and its branches are placed in perfect condition for convenient and safe public use.

I do not wish to be an alarmist but I am willing to say that I do not think the Concord & Claremont Railroad is in proper condition to meet the demands upon it.

For the increasing Sunapee Lake travel, heavy parlor cars are now being run, and within a week past, owing to the burning of a bridge at Andover, all the Northern Railroad through trains for a time went by way of Claremont.

Heavier cars and faster trains are putting a strain upon this road which it is not prepared to bear. Such trains as are now running should not be allowed to strike rapidly upon wooden culverts, such as are found along the line of this road.

I might enlarge much upon these points if good would result therefrom; but I doubt not that the railroad commissioners will be prompt to make careful investigations and proper requirements concerning the Concord & Claremont Railroad, of both the Northern Railroad, the lessor, and the Boston & Maine Railroad, the lessee, of that road.

I write about the Concord & Claremont road because I ride upon it more frequently than upon any other. But I do not wish to be invidious. The railroad war is now ended and two great combinations, the Boston & Maine and the Concord & Montreal, control, substantially, New Hampshire's railroad system. Neither can have any excuse for not giving the people of New Hampshire the best, and, above all, the safest possible railroad facilities, or for not complying with all laws of the State. They will do this if faithfully and persistently followed up by the railroad commissioners, upon whom alone the people can rely for their protection, and who have been selected solely for their ability, independence, impartiality, and zeal to be the masters, for the time being, of these great corporations upon whose obedience to law and obligation the comfort and prosperity of our people so largely depend.

Very respectfully,

W. E. CHANDLER.

MANCHESTER, July 21, 1890.

Hon. A. W. Sulloway, President Northern Railroad:

SIR, — I inclose a copy of a letter from Hon. W. E. Chandler relative to the condition of the Concord & Claremont Railroad. Awaiting your reply, I am

Yours respectfully,

H. M. PUTNEY.

CONCORD, N. H., August 15, 1890.

Hon. H. M. Putney, Chairman of the Board of Railroad Commissioners:

DEAR SIR, — Yours of July 21 covering copy of communication from Hon. Wm. E. Chandler criticising the condition of the Concord & Claremont (New Hampshire) Railroad is received. In reply I beg leave to say:

It is true that the Concord & Claremont (New Hampshire) Railroad is not a first-class road in every particular, but the endeavor has been made, and I think successfully, to keep it in proper condition for the comparatively small volume of business transacted over it.

It is true, also, that several times in the course of the year, by reason of the Northern main line being blocked by a derailed train, and in one case by a burned bridge, several of the passenger trains for a portion of a day have been sent in either direction via the Claremont road, but in all such cases special instructions have been given to the trainmen to proceed at a moderate rate of speed, much slower than the regular trains of that road are run, and these special trains were composed of longer and heavier cars.

The roadbed is being improved year by year, steel rails taking the place of iron rails. Some five miles or more will be put down this season. The bridges are also being strengthened year by year, and they are now in such condition that we have not hesitated to put on our heaviest class of locomotives when occasion requires this to be done.

It is not expected that the road at present will do any heavy through business, as it has not in the past, but whenever occasion demands, it is the intention of the managers, I have no doubt, to fully meet the requirements of all business offered.

The road so far has not paid its expenses and the interest on its debt, the volume of business being greater, but the large reductions made in rates showing a smaller net income than it did prior to 1884, when the road first passed into the control of the Boston & Lowell Railroad.

As to the suggestion of Mr. Chandler relative to the liability of the Northern Railroad stockholders for improvements on the Concord & Claremont Railroad, I suppose that matter will be governed by the contract between the lessor and lessee, and is of no particular interest to the public.

In conclusion I will say that I have no doubt the managers will heed any directions the Board may think it proper to give, and will be glad to have it, with a suitable engineer, make a careful inspection of the roadbed, bridges, and culverts.

Very respectfully,

A. W. SULLOWAY, *President.*

MANCHESTER, N. H., August 20, 1890.

Hon. W. E. Chandler:

DEAR SIR, — A copy of your communication, dated July 10, relative to the physical condition of the Concord & Claremont Railroad, was transmitted to the Hon. A. W. Sulloway, president of the Northern road, and a director of the Boston & Maine, and a copy of his reply is inclosed. In addition thereto we desire to say that this Board recognizes the fact that the termination of the contest for the control of the railroads in Central New Hampshire, and the perfection, beyond dispute or doubt, of the consolidations which were attempted prior to 1889, impose upon the great corporations which now control and virtually own these roads an obligation to make upon them extensive and expensive improvements which could not reasonably be asked for or expected while it was a matter of contention as to who was to profit by such betterments, and that it is our duty as members of the railroad commission, especially upon the complaint of reputable citizens, to see to it that these obligations are neither denied or neglected. For this reason it is our purpose to make a thorough inspection of all the roads referred to as soon as may be, beginning early in September, and in accordance with your suggestion we will arrange for the services of an expert and impartial engineer when we reach the Concord & Claremont, and hope to also have the pleasure and advantage of your company in that examination.

At the same time it is due the managers of the Boston & Maine and Concord & Montreal corporations to say that they are this summer spending a very large amount of money in improving their roads in New Hampshire, and that these roads are in much better physical condition to-day than they were before. As to the Concord & Claremont, what information we have is to the effect that the bridges have been materially strengthened and are safe. That the track and roadbed are not what they should be is apparent to whoever passes over them.

Respectfully,

H. M. PUTNEY,

Chairman of New Hampshire Railroad Commission.

MANCHESTER, N. H., November 11, 1890.

Hon. A. W. Sulloway, President Northern Railroad:

DEAR SIR, — Referring to the correspondence between yourself and the Board, which grew out of the complaint of Hon. William

E. Chandler that the Concord & Claremont Railroad is in an unsafe condition (which correspondence I am advised has been submitted by you to the officials of the Boston & Maine Corporation, now in undisputed possession of the Northern Railroad and its branches, including the Concord & Claremont), I have to say: The Board has, this fall, inspected the Concord & Claremont road, not as thoroughly as we had hoped to do, but sufficiently to convince us that many of the complaints of Mr. Chandler, and others who have come to us personally with similar allegations, are in the main well founded and reasonable.

The bridges upon the road are, we believe, sound and safe for such business as it has at present. About one half the track, or twenty-five miles, is in steel, and is in fair shape. The other half is in iron, which is broken and battered and should have been sent to the scrap heap years ago. Of ballast there is scarcely enough on some sections to be discernible by the naked eye a short distance away. The masonry upon the upper end is of the most primitive pattern. The ties are generally sound and sufficient in number. The station at Sunapee Lake is utterly unfit for the purposes for which it is used, and a new one is imperatively demanded to accommodate the large and rapidly increasing business at that point, and there are others upon the line which need enlargement and repairs. The curves are needlessly sharp and too numerous by more than one half. The road as a whole may be safe for light and slow trains, such as it carries in winter, but we quite agree with its complaining patrons, that it is not in condition to do the summer business which it has.

In making these criticisms we bear in mind that as the Boston & Maine has but recently been securely in control of the Concord & Claremont, and did not take formal possession of it until October 1, it cannot fairly be held responsible for its physical condition at this time, but it is now incumbent upon that corporation to put it in repair as soon as the weather will permit, and, by making the improvements which this letter will suggest, remove all just cause of complaint.

Will you, as president of the Northern, and one of the directors of the Boston & Maine, call the attention of your associates in the management of these corporations to this letter and urge their speedy compliance with its suggestions?

Respectfully,

H. M. PUTNEY,

For the Board.

FRANKLIN, November 13, 1890.

Hon. H. M. Putney, Chairman Railroad Commissioners:

DEAR SIR, — Yours of the 11th inst., referring to former correspondence and suggestions relative to the Concord & Claremont Railroad, is received. I will at once forward your communication to the general manager of the Boston & Maine Railroad, and I have no doubt that proper consideration will be given to the same, and as soon as circumstances will permit, the defects named will be so far remedied that patrons of the road will have no further cause to complain.

Very respectfully,

A. W. SULLOWAY,

President Northern and Concord & Claremont Railroads.

CONCORD, N. H., November 19, 1890.

Henry M. Putney, Chairman New Hampshire Railroad Commission, Manchester, N. H.:

DEAR SIR, — I have the honor to acknowledge the receipt of a copy of your letter of the 11th to the president of the Northern Railroad concerning the condition of the Concord & Claremont road. I desire to express my gratification that the commission has taken so full and appropriate action, which I trust may result in the thorough repair of the Concord & Claremont road, such as the corporation owes it to the public to make.

Very truly yours,

W. E. CHANDLER.

MANCHESTER, N. H., November 11, 1890.

Mr. James T. Furber, General Manager Boston & Maine Railroad:

DEAR SIR, — The passenger station at Seabrook upon the Eastern division of the Boston & Maine Railroad, at which it is claimed the sale of tickets is greater than at any other between Portsmouth and Newburyport, is a disgrace to your corporation, an imposition upon the public, and the cause of constant and just complaint by your patrons at that point. Located in one corner of a small, antiquated, and dilapidated dwelling, it is not and cannot be made either comfortable, convenient, or decent, and it should at once be replaced by an entirely new structure.

Last year, at the time of our annual inspection, the Board and the citizens of Seabrook were assured by officers of the road, who accompanied us, that this station should be rebuilt as soon as possible, and upon this assurance they have waited twelve months only to find a change of from bad to worse (if anything so bad can be properly said to grow worse).

We respectfully submit that they should not be required to wait longer.

Respectfully,

H. M. PUTNEY,

For the Board.

BOSTON, November 15, 1890.

Hon. H. M. Putney, Chairman Board of Railroad Commissioners, Manchester, N. H.:

DEAR SIR, — I have yours of November 11, and referring to the same will say that your letter is the first information that I have ever received that your Board were promised that a new station should be built at Seabrook during last year. We have frequently had more or less talk with the people of Seabrook, and have endeavored to get the station moved to a different location, but there has been more or less objection to it, and the time has passed without our constructing a new building. We have had the matter in hand for the last two years, but were not aware that it had been commented upon by your Board. It is a little late now in the season to commence the construction of any buildings. We will, however, endeavor to have a new station at Seabrook before your annual inspection next year.

Yours truly,

JAMES T. FURBER,

General Manager.

MANCHESTER, N. H., December 7, 1890.

T. A. MacKinnon, General Manager Concord & Montreal Railroad:

DEAR SIR, — Referring to the recent inspection of the Concord & Montreal system we have to congratulate the corporation and the public upon the extensive, costly, and permanent improvements

made upon the road, especially upon the line of the old Boston, Concord & Montreal, during the past year, and upon the generally excellent condition of the old Concord system, including its branches.

We desire, however, to remind you that the public nuisance which serves as a union station at Newmarket Junction is still unabated. This structure, which is badly located, poorly arranged, and is populous with vermin and reeking with filth, is an offence to the senses, a destroyer of comfort, and an enemy of the health of the great number of people who are compelled to use it while waiting for trains. It is an eyesore to the town and a gross imposition upon the traveling public, for the continuance of which two great corporations like the Boston & Maine and the Concord & Montreal can offer no valid excuse.

We have repeatedly called attention to this matter and as repeatedly been assured that this decaying relic of other days should be abolished, which assurance we have communicated to the complaining patrons of the roads forming the junction there, until their faith in the promises of railroad managers and the efficiency of railroad commissions has been tested to the utmost. We earnestly recommend that a new station of sufficient size to accommodate the large transfer business there, and of a character to commend itself to the public, be erected at Newmarket Junction without further unnecessary delay. A copy of this letter will be forwarded to the other corporation interested.

Respectfully,

H. M. PUTNEY.

CONCORD, N. H., December 9, 1890.

Hon. H. M. Putney, Chairman New Hampshire Railroad Commission Manchester, N. H.:

DEAR SIR, — I am in receipt of your favor of the 7th inst., and beg to express my appreciation at your commendation of the improvements on the Concord & Montreal system. With regard to the station at Newmarket Junction, I beg to assure you that we fully realize its condition, and that we are moving as fast as possible on our part towards the erection of a new station. The two railroads have fully agreed in the matter, but there has been some delay with regard to acquiring the necessary land. It has been decided, however, that the new station will be erected this coming spring.

Yours very truly,

T. A. MACKINNON,

General Manager.

PART III.

RAILROAD RETURNS.

REPORT

OF THE

ASHUELOT RAILROAD COMPANY

FOR THE NINE MONTHS ENDING JUNE 30, 1889.

GENERAL EXHIBIT FOR NINE MONTHS.		
Total income		$17,614.30
Total expense (including taxes)		2,685.86
Net income		14,928.44
Dividends declared (8 per cent)		12,600.00
Balance for the year (surplus)		2,328.44
Balance at commencement of year	$42,652.17	
Deduct vouchers	600.00	
Balance at commencement of year as so changed		42,052.17
Balance June 30, 1889 (surplus)		44,380.61

ANALYSIS OF EARNINGS.		
Rents for use of road		$15,353.97
Income from all other sources, viz.:		2,260.33
Interest on permanent improvement	$1,727.03	
Interest on contingent fund	450.00	
Interest on current account	83.30	
Total income from all sources		$17,614.30

ANALYSIS OF EXPENSES.	
Salaries of general officers and clerks	$550.00
Total operating expenses	$550.00
Taxes, state	1,999.44
Taxes, local	136.42
Total operating expenses and taxes	$2,685.86

BALANCE SHEET, JUNE 30, 1889.

ASSETS.

Cost of road	$238,756.25	
Total permanent investments		$238,756.25
Due from agents and companies	$6,174.36	
Sinking fund	10,000.00	
Total cash assets		16,174.36
Total assets (as per books of the company)		$254,930.61

LIABILITIES.

Capital stock		$210,000.00
Unfunded debt, viz.:		550.00
Vouchers and accounts	$550.00	
Profit and loss balance		44,380.61
Total liabilities (as per books of the company)		$254,930.61

DESCRIPTION OF ROAD.

Main line of road from S. Vernon, Vt., to Keene, N.H.	24.0000 miles.
" " in New Hampshire	23.2142 "
" " in Vermont	.7100 mile.
" " in Massachusetts	.0757 "
Total road belonging to this company	24.0000 miles.
Sidings and other tracks not above enumerated	5.2733 "
Same in New Hampshire	4.9716 "
Total length of track computed as single track	29.2733 "
Same in New Hampshire	28.1858 "
Total length of steel rails in tracks, not including steel-top rails [Weight per yard, 56 lbs.]	23.5000 "
Total miles of road operated by this company	24.0000 "
Total miles of road operated by this company in New Hampshire	23.2142 "
Number of stations in New Hampshire on all roads operated by this company	6
Number of stations on all roads owned by this company	7
Same in New Hampshire	6

BRIDGES.

Number of trestle bridges of 25 feet length and upwards *	1
Aggregate length of same for single track 75 ft.	

* In New Hampshire, on miles of road owned.

Number of spans of iron bridges of 25 feet and upwards *	4
Aggregate length of same for single track 496 ft.	
Number of spans of timber bridges of 25 feet and upwards *	1
Aggregate length of same for single track 700 ft.	
Number of crossings of highways at grade * .	21
" " " over railroad .	1
" " " under railroad .	1
Number of highway bridges 18 feet above track .	1
Number of crossings at which there are neither signals nor flagmen *	21

CAPITAL STOCK.

Capital stock authorized by charter .	$500,000	
Capital stock authorized by votes of company	210,000	
Capital stock issued (number of shares, 2,100); amount paid in		$210,000.00
Total amount paid in (as per books of the company)		210,000.00

NAMES AND RESIDENCES OF OFFICERS.

N. A. Leonard, *President*, Springfield, Mass.; W. H. Wilson, *Auditor*, Springfield, Mass.; J. Mulligan, *Superintendent*, Springfield, Mass.; H. E. Howard, *General Freight Agent*, Springfield, Mass.; E. C. Watson, *General Ticket Agent*, Springfield, Mass.; E. F. Lane, *Treasurer*, Keene, N. H.; E. F. Lane, *Clerk of Corporation*, Keene, N. H.

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

N. A. Leonard, J. Mulligan, W. H. Haile, G. E. Frink, Springfield, Mass.; A. B. Harris, Boston, Mass.; Oscar Edwards, Northampton, Mass.; E. F. Lane, Keene, N. H.

PROPER ADDRESS OF THE COMPANY.

THE ASHUELOT RAILROAD COMPANY,

SPRINGFIELD, HAMPDEN CO., MASS.

* In New Hampshire, on miles of road owned.

N. A. LEONARD,
President.
E. F. LANE,
Treasurer.
J. MULLIGAN,
Superintendent.

STATE OF NEW HAMPSHIRE.

HAMPDEN ss. SPRINGFIELD, March 18, 1890. Then personally appeared N. A. Leonard, E. F. Lane, and J. Mulligan, and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

WILLIAM F. CALLENDER,
Notary Public.

REPORT

OF THE

ATLANTIC AND ST. LAWRENCE RAILROAD COMPANY

FOR THE NINE MONTHS ENDING JUNE 30, 1889.

GENERAL EXHIBIT FOR NINE MONTHS.		
Total income		$215,220.23
Total expense (including taxes)		204,632.56
Net income		10,587.67
Interest accrued during year		125,451.90
Proportion for New Hampshire of rental paid by lessees as guaranteed interest on stock and bonds,	$360,451.50	
Balance for the nine months (debit)		114,864.23

ANALYSIS OF EARNINGS.	
From local passengers (all passengers starting from or stopping at any station on this road)*	$27,532.94
From through passengers (to and from other roads over and beyond this road)	19,133.06
From express and extra baggage	3,574.92
From mails	4,779.08
Total earnings from passenger department	55,020.00
From local freight (all freight starting from or stopping at any station on this road)*	46,348.61
From through freight (to and from other roads over and beyond this road)	113,473.62
Total earnings from freight department	159,822.23
Total transportation earnings	214,842.23
Income from all other sources	378.00
Total income from all sources	$215,220.23

* Including passengers and freight to and from other roads starting from or stopping at stations on this road.

ANALYSIS OF EXPENSES.

Salaries of general officers and clerks	$3,501.67
Legal expenses	1,013.10
Insurance	1,555.30
Stationery and printing	106.26
Outside agencies and advertising	2,485.50
Contingencies and miscellaneous	680.61
Repairs of bridges (including culverts and cattle-guards)	2,906.93
Repairs of buildings	5,463.11
Repairs of fences, road-crossings, and signs	1,678.66
Renewal of ties	5,394.90
[No. laid, 17,983.]	
Repairs of roadbed and track	19,228.77
Repairs of locomotives	17,133.47
Fuel for locomotives	30,631.81
Water supply	998.87
Oil and waste	1,372.95
Locomotive service *	23,416.70
Repairs of passenger cars	6,513.31
Passenger-train service *	3,523.98
Passenger-train supplies	719.67
Repairs of freight cars	14,987.62
Freight-train service *	10,450.20
Freight-train supplies	1,439.34
Mileage freight cars †	3,346.35
Telegraph expenses	3,561.48
Loss and damage, freight and baggage	888.14
Loss and damage, property and cattle	116.43
Personal injuries	587.32
Agents' and station service *	28,635.74
Station supplies	6,070.42
Total operating expenses	$198,408.61
Taxes, state	6,092.70
Taxes, local	131.25
Total operating expenses and taxes	$204,632.56

BALANCE-SHEET, JUNE 30, 1889.

ASSETS.

Cost of road	$2,952,781	
Total permanent investments		2,952,781.00

* Salaries and wages. † Debit balances.

LIABILITIES.	
Capital stock, $5,484,000 — proportion for New Hampshire	$1,908,658.00
Funded debt	1,044,123.00
Total liabilities (as per books of the company)	$2,952,781.00

MILEAGE, TRAFFIC, ETC.		
Passenger-train mileage		77,969
Freight-train mileage		168,284
Total revenue train mileage		246,253
Switching-train mileage (not treated as train miles)	49,777	
Other train mileage		8,965
Total train mileage		255,218
Number of season-ticket passengers *	857	
Number of local passengers (including season)		50,588
Number of through passengers (to and from other roads going over and beyond this road)		15,368
Total number of passengers carried		65,956
Local passenger mileage (local passengers carried one mile)		758,820
Through passenger mileage (through passengers carried one mile)		799,136
Total passenger mileage		1,557,956
Number tons local freight		144,074
Number tons through freight (to and from other roads going over and beyond this road)		387,397
Total number tons freight carried		531,471
Local freight mileage (tons local freight carried one mile)		2,279,250
Through freight mileage (tons through freight carried one mile)†		20,144,644
Total freight mileage		22,423,894
Average number of persons employed		269

DESCRIPTION.	
Main line of road from Island Pond, Vt., to Portland, Me.	149.58 miles.
Main line of road in New Hampshire	52.06 "
" " Vermont	14.92 "
" " Maine	82.60 "

* Reckoning twelve passengers per week for time of each season ticket.
† Carried to and from other roads.

Total road belonging to this company . . .	149.58 miles.
Sidings and other tracks not above enumerated .	33.85 "
Same in New Hampshire	10.24 "
Total length of track, computed as single track .	183.43 "
Same in New Hampshire	62.30 "
Total length of steel rails in tracks, not including steel-top rails	149.58 "
[Weight per yard, 65 lbs.]	
Number of stations on all roads owned by this company	33
Same in New Hampshire	12

EQUIPMENT.

Equipment furnished by the lessees.

LIST OF ACCIDENTS.

	From causes beyond their own control (in New Hampshire).		From their own misconduct or carelessness (in New Hamshire).		Total in New Hampshire.		Total on whole road operated.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
Passengers.	.....	.....	.....	.....	.....	.....	.....	2
Employés ..	.. ..	.....	.....	2	.....	2	.....	4
Others.....	.....	.....	1	....	1	.... ..	2	4

STATEMENT OF EACH ACCIDENT IN NEW HAMPSHIRE.

October 22, 1888. — Gorham, W. J. Wescott, brakeman, jumping on moving train.

December 6. — Gorham, E. B. Wilson, yardman, coupling.

December 10. — Gorham, M. Lyon, trespasser, getting on moving train, killed.

GENERAL INFORMATION.	
Maximum weight of locomotives in working order.	35 tons.
Average " " " "	32½ "
Maximum weight of tenders full of fuel and water.	30 "
Average " " " "	27½ "
Maximum weight of passenger cars . . .	35 "
Average " " " . . .	27½ "
" " mail and baggage cars . .	20 "
" " 8-wheel box freight cars . .	11 "
" " 8-wheel platform cars . .	7½ "
Length of heaviest engine and tender, from center of forward truck-wheel of engine to center of rear wheel of tender	41 feet 5 in.
Total length of heaviest engine and tender over all.	51 feet 4 in.
Number of locomotives equipped with train brake. [Kind of brake, Westinghouse automatic.]	All passenger engines.
Number of cars equipped with train brake . . [Kind of brake, Westinghouse automatic.]	All passenger cars.
Number of passenger cars with Miller platform and buffer	All passenger cars.

BRIDGES.	
Number of spans of iron bridges of 25 feet and upwards *	22
Aggregate length of same for single track, 1,777 ft.	
Number of crossings of highways at grade * . .	25
" " " over railroad .	4
" " " under railroad .	1
Number of highway bridges less than 18 feet above track	4
Number of crossings at which there are neither signals nor flagmen *	25

RATES OF FARE, ETC.	
Average rate of fare per mile (not including season tickets) for local passengers on road operated by this company †	3.63 cents.
Average rate of fare per mile received from passengers to and from other roads	2.39 "
Average rate of fare per mile for season-ticket passengers ‡	1.25 "

* In New Hampshire, on miles of road owned. † Rates as per tariff.
‡ Reckoning twelve passengers per week for time of each season ticket.

Average rate of fare per mile received from all passengers		2.97 cents.
Average rate of local freight per ton per mile *		2.03 "
Average rate of freight per ton per mile received from freight to and from other roads		.56 "
Average rate of freight per ton per mile received from all freight		.71 "

CAPITAL STOCK.

Capital stock authorized by charter and acts of Legislature	$5,484,000	
Capital stock authorized by votes of company	5,484,000	
Capital stock issued, amount paid in		$5,484,000.00
Total amount paid in as per books of the company.		5,484,000.00
Total number of stockholders	1,337	

DEBT.

Funded debt as follows:		
1st mortgage bonds, due 1884; rate of interest, 6 per cent		$1,499,916.00
Interest paid on same during nine months	$89,994.96	
2d mortgage bonds, rate of interest, 6 per cent		712,932.00
Interest paid on same during nine months	$42,775.92	
3d mortgage bonds, rate of interest, 6 per cent		786,984.00
Interest paid on same during nine months	$47,219.04	
Balance on exchange of bonds		168.00
Interest paid on same during nine months	$10.08	
Total amount of funded debt		$3,000,000.00

NAMES AND RESIDENCES OF OFFICERS.

Joseph Hickson, *President*, Montreal, Que.; Philip Henry Brown, *Vice-President*, Portland, Me.; W. W. Duffett, *Treasurer*, Portland, Me.; F. R. Barrett, *Clerk of Corporation*, Portland, Me.

* Rates as per tariff.

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

Joseph Hickson, Sir Alex. T. Galt, Montreal, Que.; Philip Henry Brown, Portland, Me.; Harrison J. Libby, Franklin R. Barrett, Francis K. Swan, W. W. Duffett, George P. Wescott, Wm. L. Putnam, Portland, Me.

PROPER ADDRESS OF THE COMPANY.

ATLANTIC & ST. LAWRENCE RAILROAD COMPANY,

PORTLAND, ME.

JOSEPH HICKSON,
PHILIP HENRY BROWN,
SIR ALEX. T. GALT,
HARRISON J. LIBBY,
FRANKLIN R. BARRETT,
FRANCIS K. SWAN,
W. W. DUFFETT,
GEORGE P. WESCOTT,
WILLIAM L. PUTNAM,
Directors.

W. W. DUFFETT,
Treasurer.

STATE OF MAINE.

CUMBERLAND ss. March 13, 1890. Then personally appeared F. R. Barrett, director, W. W. Duffett, treasurer, and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

GEO. E. B. JACKSON,
Justice of the Peace.

OPERATING REPORT

OF THE

BOSTON, CONCORD & MONTREAL RAILROAD COMPANY

FOR THE EIGHT MONTHS ENDING MAY 31, 1889.

GENERAL EXHIBIT FOR EIGHT MONTHS.	
Total income	$653,122.69
Total expense (including taxes)	512,894.22
Net income	140,228.47

ANALYSIS OF EARNINGS.		
From local passengers (all passengers starting from or stopping at any station on this road) *		$48,539.10
From through passengers (to and from other roads over and beyond this road)		159,977.31
From express and extra baggage		12,026.53
From mails		15,928.52
Total earnings from passenger department		236,471.46
From local freight (all freight starting from or stopping at any station on this road) *		67,446.44
From through freight (to and from other roads over and beyond this road)		353,898.86
Total earnings from freight department		421,345.30
Total transportation earnings		657,816.76
Rent of tenements, etc.		584.61
Losses on miscellaneous property in excess of income from other miscellaneous sources	$5,278.68	
Total income from all sources		$653,122.69

* Including passengers and freight to and from other roads starting from or stopping at stations on this road.

ANALYSIS OF EXPENSES.

Salaries of general officers and clerks	$14,294.42
Legal expenses	3,694.81
Insurance	843.81
Stationery and printing	2,685.64
Outside agencies and advertising	2,824.70
Contingencies and miscellaneous	353.81
Repairs of bridges (including culverts and cattle-guards)	6,312.52
Repairs of buildings	11,897.34
Repairs of fences, road-crossings, and signs	2,881.54
Renewal of rails	9,186.83
Renewal of ties	10,369.32
Repairs of roadbed and track	68,731.80
Repairs of locomotives	32,471.28
Fuel for locomotives	94,583.75
Water supply	2,994.05
Oil and waste *	205.90
Locomotive service †	47,699.03
Repairs of passenger cars	14,760.42
Passenger-train service †	14,538.89
Passenger-train supplies	5,886.14
Mileage passenger cars ‡	2,336.55
Repairs of freight cars	35,365.65
Freight-train service †	29,929.09
Freight-train supplies	2,685.65
Mileage freight cars ‡	25,318.78
Telegraph expenses	6,283.84
Loss and damage, freight and baggage	619.12
Loss and damage, property and cattle	573.79
Personal injuries	2,274.00
Agents' and station service †	30,999.72
Station supplies	5,574.18
Total operating expenses	$488,764.57
Taxes, state / Taxes, local	24,129.65
Total operating expenses and taxes	$512,894.22

MILEAGE, TRAFFIC, ETC.

Passenger-train mileage	260,861
Freight-train mileage	463,208
Total revenue train mileage	724,069
Switching-train mileage	58,850
Other train mileage	21,797
Total train mileage	804,716

* This is a credit item, and the amount is deducted from total expenses.
† Salaries and wages. ‡ Debit balances.

Number of local passengers (including season) .	106,887
Number of through passengers (to and from other roads going over and beyond this road) . .	142,359
Total number of passengers carried . .	249,246
Local passenger mileage (local passengers carried one mile)	1,360,263
Through passenger mileage (through passengers carried one mile)	7,307,103
Total passenger mileage	8,667,366
Number tons local freight	132,894
Number tons through freight (to and from other roads going over and beyond this road) . .	390,231
Total number tons freight carried . . .	523,215
Local freight mileage (tons local freight carried one mile)	3,561,538
Through freight mileage (tons through freight carried one mile) *	28,756,168
Total freight mileage	32,317,706
Average number of persons employed . . .	940

STATEMENT OF EACH ACCIDENT IN NEW HAMPSHIRE.

November 30, 1888. — Byron Gordon, of Woodsville, N. H., a brakeman, fell off a freight car in the Woodsville yard receiving injuries to his legs.

December 24. — A man called "Orford" (correct name unknown) was struck by a locomotive while walking upon the track between Bath, N. H., and Woodsville, N. H.

February 20, 1889. — Mrs. Lorina Sanborn, of Sanbornton, N. H., was struck by a locomotive at highway crossing near Tilton, N. H., receiving fatal injuries.

March 11. — Frank Boprey, of Capleton, Que., employed by contractors doing work at Scott's, N. H., with a pile driver, was caught between engine and car while attempting to make a hitch or coupling, and was fatally injured.

NAMES AND RESIDENCES OF OFFICERS.

C. E. A. Bartlett, *General Manager*, Chelmsford, Mass.; Myron Taylor, *Auditor*, Arlington, Mass.

C. E. A. BARTLETT,
General Manager.

* Carried to and from other roads.

REPORT

OF THE

PEMIGEWASSET VALLEY RAILROAD

FOR THE NINE MONTHS ENDING JUNE 30, 1889.

GENERAL EXHIBIT FOR NINE MONTHS.	
Total income	$15,402.00
Total expense (including taxes)	245.67
Net income	15,156.33
Dividends declared (3 per cent) February 1, 1889, paid by the Boston, Concord & Montreal Railroad to stockholders of Suncook Valley Railroad	15,102.00
Balance for the year (surplus)	54.33
Balance at commencement of year (surplus)	80.87
Balance June 30, 1889 (surplus)	135.20

ANALYSIS OF EARNINGS. *		
Rents for use of road, 6 months, to February 1, 1889		$15,102.00
Income from other sources, viz.:		300.00
Received for expenses of organization	$300.00	
Total income from all sources		$15,402.00

ANALYSIS OF EXPENSES. *	
Salaries of general officers and clerks	$235.42
Outside agencies and advertising	10.25
Total operating expenses	$245.67

* Included in reports of Boston & Lowell and Concord Railroads.

BALANCE-SHEET, JUNE 30, 1889.

ASSETS.

Cost of road	$411,157.61	
Cost of equipment	91,842.14	
Total permanent investments		$502,999.75
Cash	$400.25	
Balance of income for organization	135.20	
Total cash assets		535.45
Total assets (as per books of the company)		$503,535.20

LIABILITIES.

Capital stock	$503,400.00
Profit and loss balance	135.20
Total liabilities (as per books of the company)	$503,535.20

Present or Contingent Liabilities not included in the Balance-sheet.

Unsettled claims for construction, to be paid by capital stock authorized by corporation, on which dividends are to be paid under the lease of the Pemigewasset Valley Railroad to the Boston, Concord & Montreal Railroad, estimated at $26,600	
Total (not included in balance-sheet)	$26,600.00

DESCRIPTION OF ROAD. *

Main line of road from Plymouth to Franconia, and branch from Campton to Livermore, estimated	75.000 miles.
Main line of road in New Hampshire, estimated	75.000 "
Track laid, if road is not completed	20.057 "
Sidings and other tracks not above enumerated (not including sidings built by B., C. & M. R. R., and B. & L. R. R., since lease of road, of which this road has no account)	.370 "
Total length of track computed as single track [Weight per yard, 56 lbs.]	20.057 "
Number of stations on all roads owned by this company	8
Same in New Hampshire	8

* Included in reports of Boston & Lowell and Concord Railroads.

EQUIPMENT.	
Number of locomotives leased to B., C. & M. R. R., and operated by B. & L. and Concord R. R.. .	2
Number of passenger cars	2
Number of freight cars (basis of 8 wheels) . .	125

STATEMENT OF EACH ACCIDENT IN NEW HAMPSHIRE.

See reports of Boston & Lowell and Concord Railroads.

CAPITAL STOCK.		
Capital stock authorized by charter .	$2,000,000	
Capital stock authorized by votes of company	530,000	
Capital stock issued (number of shares, 5,034); amount paid in		$503,400.00
Total amount paid in (as per books of the company)		503,400.00
Total number of stockholders	173	
Number of stockholders in New Hampshire .	126	
Amount of stock held in New Hampshire	$357,600	

NAMES AND RESIDENCES OF OFFICERS.

John J. Bell, *President*, Exeter, N. H.; Edward D. Harlow, *Treasurer*, Boston, Mass.; George H. Adams, *Clerk of Corporation*, Plymouth, N. H.

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

John J. Bell, Exeter, N. H.; Daniel Saunders, Lawrence, Mass.; Nathan H. Weeks (deceased), Plymouth, N. H.; Joseph W. Campbell, Woodstock, N. H.; Daniel Barnard, Franklin, N. H.; John C. French, Henry Chandler, Manchester, N. H.; John J. Cilley, South Deerfield, N. H.; George W. Hills, Lawrence, Mass.

PROPER ADDRESS OF THE COMPANY.

PEMIGEWASSET VALLEY RAILROAD.

President's Office, EXETER, N. H.

Treasurer's Office, BOSTON, Mass.

Clerk's Office, PLYMOUTH, N. H.

The Pemigewasset Valley Railroad is leased for 100 years to the Boston, Concord & Montreal Railroad, and was operated from September 30, 1888, to May 31, 1889, by the Boston & Lowell Railroad as agent for the Boston, Concord & Montreal Railroad, and for the month of June, 1889, by the Concord Railroad as said agent.

EDWARD D. HARLOW,
Treasurer.

STATE OF MASSACHUSETTS.

SUFFOLK SS. BOSTON, February 15, 1890. Then personally appeared Edward D. Harlow, and made oath to the truth of the foregoing statement by him subscribed, according to his best knowledge and belief.

GEORGE N. CARPENTER,
Justice of the Peace.

REPORT

OF THE

BOSTON & MAINE RAILROAD

FOR THE NINE MONTHS ENDING JUNE 30, 1889.

GENERAL EXHIBIT FOR NINE MONTHS.		
Total income		$9,902,674.68
Total expense (including taxes)		7,053,255.91
Net income		2,849,418.77
Rentals:		2,197,837.14
Eastern R. R.	$653,956.35	
Boston & Lowell R. R.	507,999.81	
Worcester, Nashua & Rochester R. R.	187,500.00	
Connecticut & Passumpsic Rivers R. R.	174,750.00	
Manchester & Lawrence R. R.	76,500.00	
Central Massachusetts R. R.	75,000.00	
Portland, Saco & Portsmouth R. R.	67,725.00	
Nashua & Lowell R. R.	54,750.00	
Lowell & Andover R. R.	39,375.00	
Portsmouth & Dover R. R.	34,605.00	
Portsmouth, Great Falls & Conway R. R.	33,937.50	
Massawippi Valley R. R.	33,000.00	
Peterborough R. R.	26,774.73	
Dover & Winnipesaukee R. R.	21,750.00	
Eastern R. R. in New Hampshire	16,875.00	
Stony Brook R. R.	15,000.00	
Wilton R. R.	12,712.50	
Newburyport City R. R.	4,500.00	
West Amesbury Branch R. R.	4,275.00	
Kennebunk & Kennebunkport R.R.	2,193.75	
Wolfeborough R. R.	1,680.00	
Sundry track rentals	3,037.50	
Northern R. R. contract	149,940.00	

Interest accrued during nine months . . .		$347,674.38
On funded debt	$265,851.22	
On other debt	81,823.16	
Dividends declared (8 per cent)		560,000.00
4 per cent declared payable Nov. 15, 1888. *		
4 per cent declared payable May 15, 1889.		
Balance for nine months (deficit)		256,092.75
Balance at commencement of year, Oct. 1, 1888 .		1,777,949.92
Balance June 30, 1889 (surplus)		1,521,857.17

ANALYSIS OF EARNINGS.

From local passengers (all passengers starting from and stopping at any station on this road) † . .		$3,967,392.65
From through passengers (to and from other roads)		637,829.95
From express and extra baggage		315,937.20
From mails		127,035.52
Total earnings from passenger department .		5,048,195.32
From local freight (all freight starting from and stopping at any station on this road) † . . .		2,647,105.39
From through freight (to and from other roads) on through way-bill		1,950,102.23
Total earnings from freight department . .		4,597,207.62
Total transportation earnings		9,645,402.94
Rents for use of road		5,704.97
Income from all other sources, viz.: . . .		251,566.77
Rents of tenements, lands, etc. .	$108,710.54	
Income from investments . .	95,069.64	
Income from coal hoisting engines	5,394.14	
Miscellaneous income . . .	42,392.45	
Total income from all sources		$9,902,674.68

ANALYSIS OF EXPENSES.

Salaries of general officers and clerks . . .	$145,962.38
Legal expenses	43,981.85
Insurance	22,615.57
Stationery and printing	72,307.13
Outside agencies and advertising	34,842.43
Contingencies and miscellaneous	74,875.17
Repairs of bridges (including culverts and cattle-guards)	212,579.84
Repairs of buildings	266,830.68

* This dividend was paid out of the earnings of the year ending September 30, 1888.

† Including passengers and freight to and from other roads starting from or stopping at stations on this road.

Repairs of fences, road-crossings, and signs		$55,684.29
Renewal of rails		102,890.20
[No. tons steel laid, 3,398.164.]		
[No. tons iron laid, 836.1336.]		
Renewal of ties		155,418.30
[No. laid, 198,471.]		
Repairs of roadbed and track		702,588.60
Repairs of locomotives		313,710.74
Fuel for locomotives		854,245.88
[Tons of coal, 185,877; cords of wood, 10,560.]		
Water supply		51,775.38
Oil and waste		18,960.62
Locomotive service *		553,447.16
Repairs of passenger cars		335,063.68
Passenger-train service *		276,405.27
Passenger-train supplies		52,807.93
Mileage passenger cars †		3,550.49
Repairs of freight cars		286,727.09
Freight-train service *		371,819.18
Freight-train supplies		14,766.88
Mileage freight cars †		127,126.74
Telegraph expenses		84,595.31
Loss and damage, freight and baggage; Loss and damage, property and cattle		30,427.27
Personal injuries		140,487.33
Agents' and station service *		1,014,320.95
Station supplies		170,995.46
Total operating expenses		$6,591,809.80
Taxes, state; Taxes, local		461,446.11
Total operating expenses and taxes		$7,053,255.91

PROPERTY ACCOUNTS: CHARGES AND CREDITS DURING THE NINE MONTHS.

Expenditures charged to property accounts:		
2 shares of Newburyport R. R. stock	$6.00	
Land in Wakefield	13,450.00	
700 shares of St. Johnsbury & Lake Champlain R. R. stock	1,000.00	
Bonds of St. Johnsbury & Lake Champlain R. R.	52,500.00	
Bonds of Portland Union Ry. Station Co.	108,000.00	
Total charges to property accounts		$174,956.00
Net addition to property accounts for the nine months		174,956.00

* Salaries and wages. † Debit balances.

BALANCE-SHEET, JUNE 30, 1889.

ASSETS.

Cost of road	$9,620,937.63	
Cost of equipment	1,308,180.00	
Lands in Dover and Old Orchard	14,132.21	
" Portland	16,467.50	
" Saco	15,000.00	
" Somerville	5,850.00	
" Wakefield	13,450.00	
Stock of Portland & Rochester R. R.	300,000.00	
Stock of Portland & Ogdensburg R. R.	146,238.80	
Stock of Dover & Winnipesaukee R. R.	263,144.48	
Stock of Danvers R. R.	27,445.00	
Stock of Orchard Beach R. R.	49,624.89	
Stock of St. Johnsbury & Lake Champlain R. R.	1,000.00	
Bonds of St. Johnsbury & Lake Champlain R. R.	52,500.00	
Bonds of Portland Union Ry. Station Co.	108,000.00	
Bonds of Danvers R. R.	125,000.00	
Bonds of Newburyport R. R.	302,499.95	
Steamer Mount Washington and wharves	69,260.24	
Total permanent investments		$12,438,730.70
Cash	$578,322.39	
Bills receivable	10,715.74	
Due from agents and companies	1,972,036.62	
Materials and supplies	1,411,190.62	
Sinking fund	165,170.29	
Debit balances	583,400.67	
Improvement account	2,265,294.91	
" " Eastern R. R.	1,227,039.83	
Total cash assets		8,213,171.07
Total assets (as per books of the company)		$20,651,901.77

LIABILITIES.

Capital stock		$7,000,000.00
Funded debt		6,484,000.00
Unfunded debt, viz.:		4,241,024.99
Interest unpaid	$128,480.00	
Dividends unpaid	28,294.00	
Notes payable	3,180,000.00	

Vouchers and accounts . .	$904,250.99	
Accrued interest, rentals, and taxes, not yet due .		$629,798.56
Sundry lease accounts		383,041.33
Suspense account of Boston, Concord & Montreal R. R., etc.		227,009.43
Profit and loss balance		1,521,857.17
Improvement account fund		165,170.29
Total		$20,651,901.77

MILEAGE, TRAFFIC, ETC.

Passenger-train mileage	4,105,156
Freight-train mileage	2,633,411
Total revenue train mileage	6,738,567
Switching-train mileage	1,286,378
Other train mileage	197,081
Total train mileage	8,222,026
Number of season-ticket passengers * . . .	2,165,016
Number of local passengers (including season) .	20,159,875
Number of through passengers (to and from other roads going over and beyond this road) . .	566,861
Total number of passengers carried . .	20,726,736
Local passenger mileage (local passengers carried one mile)	223,104,608
Through passenger mileage (through passengers carried one mile)	35,161,426
Total passenger mileage	258,266,034
Number tons local freight	2,449,328
Number tons through freight (to and from other roads going over and beyond this road) . .	1,964,884
Total number tons freight carried . . .	4,414,212
Local freight mileage (tons local freight carried one mile)	100,348,686
Through freight mileage (tons through freight carried one mile) †	147,517,103
Total freight mileage	247,865,789
Average number of persons employed . . .	9,769

DESCRIPTION OF ROAD.

Main line of road from Boston, Mass., to Portland, Me.	115.500 miles.
Main line of road in New Hampshire . . .	34.750 "
" " Massachusetts . . .	36.750 "
" " Maine	44.000 "

* Reckoning twelve passengers per week for time of each season ticket.
† Carried to and from other roads.

Double track on main line	71.740	miles.
Same in New Hampshire	15.170	"
Branches owned by the company, viz.:		
Medford (single track)	2.000	"
Methuen (double track, 1; single track, 2.75) .	3.750	"
Great Falls (single track)	2.750	"
Total length of branches owned by the company .	8.500	"
Total length of branches owned by company in New Hampshire	2.750	"
Total length of branches owned by company in Massachusetts	5.750	"
Double track on branches	1.000	"
Total road belonging to this company . . .	124.000	"
Sidings and other tracks not above enumerated .	100.120	"
Same in New Hampshire	17.960	"
Total length of track computed as single track .	296.860	"
Same in New Hampshire	70.630	"
Total length of steel rails in track, not including steel-top rails	224.770	"
[Weights per yard, 60 and 72 lbs.]		

Roads and Branches belonging to other Companies, operated by this Company under lease or contract.

Eastern R. R. of Massachusetts and branches, length	118.840	miles.
Worcester, Nashua & Rochester R. R., "	94.480	"
Eastern R. R. in New Hampshire, "	16.080	"
Portland, Saco & Portsmouth R. R., "	50.760	"
Portsmouth, Great Falls & Conway R. R., "	72.860	"
Wolfeborough R. R., "	12.030	"
Chelsea Beach R. R., "	3.340	"
Newburyport City R. R., "	1.970	"
Portsmouth & Dover R. R., "	10.880	"
Danvers R. R., "	9.259	"
Newburyport R. R., "	26.979	"
Lowell & Andover R. R., "	8.730	"
West Amesbury Branch, "	4.450	"
Dover & Winnipesaukee R. R., "	29.000	"
Manchester & Lawrence R. R., "	22.390	"
Kennebunk & Kennebunkport R. R., "	4.500	"
Boston & Lowell R. R. and branches, "	98.090	"
Nashua & Lowell R. R., "	14.500	"
Stony Brook R. R., "	13.160	"
Wilton R. R., "	15.500	"
Peterborough R. R., "	10.500	"
Manchester & Keene R. R., operated jointly with Concord R. R., "	29.590	"
Central Massachusetts R. R., "	98.770	"
Connecticut & Passumpsic Rivers R. R., "	110.300	"

Massawippi Valley Railway, length	36.750	miles
Northern and Concord & Claremont R. R., length	172.320	"
Total length of above roads	1,086.028	"
" " " in New Hampshire	450.820	"
" " " in other States	635.208	"
Eastern R. R. of Mass. and branches in Mass.	118.840	"
Worcester, Nashua & Rochester R. R., "	39.460	"
Chelsea Beach R. R., "	3.340	"
Newburyport City R. R., "	1.970	"
Newburyport R. R., "	26.979	"
Danvers R. R., "	9.259	"
Lowell & Andover R. R., "	8.730	"
West Amesbury Branch R. R., "	2.130	"
Boston & Lowell R. R. and branches, "	98.090	"
Nashua & Lowell R. R., "	9.250	"
Stony Brook R. R., "	13.160	"
Central Massachusetts R. R., "	98.770	"
Portland, Saco & Portsmouth R. R., in Maine	50.760	"
Kennebunk & Kennebunkport R. R., "	4.500	"
Portsmouth, Great Falls & Conway R. R., in Maine	2.920	"
Connecticut & Passumpsic Rivers R. R., in Vermont	110.300	"
Massawippi Valley Railway, in Canada	36.750	"
Total length of above roads	1,086.028	"
" " " in New Hampshire	450.820	"
" " " in other States	635.208	"
" " " in Massachusetts	429.978	"
" " " in Maine	58.180	"
" " " in Vermont	110.300	"
" " " in Canada	36.750	"
Total miles of road operated by this company	1,210.028	"
Total miles of road operated by this company in New Hampshire	488.320	"
Number of stations in New Hampshire on all roads operated by this company	159	
Number of telegraph offices in same	100	
Number of stations on all roads owned by this company	630	
Same in New Hampshire	180	

EQUIPMENT.

	Owned by leased roads.	Owned by B. & M. R. R.	Total.
Number of locomotives	298	145	443
Number of passenger cars	423	243	666
Number of parlor or sleeping cars	12	12	24
Number of baggage, mail, and express cars	84	43	127
Number of freight cars (basis of 8 wheels)	5,849¾	2,383½	8,233¼
Number of other cars	297	105	402
Snow plows and ice cutters	47	17	64

LIST OF ACCIDENTS.

	From causes beyond their own control (in New Hampshire).		From their own misconduct or carelessness (in New Hampshire).		Total in New Hampshire.		Total on whole road operated.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
Passengers	.....	.....	.....	1	.....	1	1	17
Employés	.....	.....	3	8	3	8	16	103
Others	.....	.....	6	4	6	4	54	41

STATEMENT OF EACH ACCIDENT IN NEW HAMPSHIRE.

October 24, 1888. — At Concord, George H. Colby, a brakeman, was found dead beside the track, a short distance from the ice house. It is supposed that he had a paralytic fit, and fell off his train and died.

October 29. — At Portsmouth, an unknown man, a trespasser, attempting to board a moving train near Vaughan street, fell under the wheels and was killed.

October 29. — At Nashua Junction, Charles Lezott, a shifter, coupling cars, had his arm so crushed as to necessitate amputation.

November 16. — At Manchester, Erastus B. Rowell, a trespasser, boarding a moving train, and jumping off on the other side, fell and broke his leg.

November 19. — At Dover, Patrick Mooney, a trespasser, was found dead, wedged between the cinder valve and brace of an engine, upon the arrival of a train at Rochester.

November 20. — At Windham, W. E. Hughes, station agent, coupling cars, had his collar bone broken.

November 28. — At Nashua, William P. Penniman, a brakeman, fell under the wheels and had his foot cut off and arm broken.

November 14. — At Dover, James Hefferan, a brakeman, in coupling cars had his hand badly crushed.

December 15. — At Concord, James P. Landers, a brakeman, was struck by the morning train in the yard and killed.

December 29. — At Hampton, Joseph B. Hall, a passenger, stepped off a train at the station before it had come to a stop, and struck against a post and was thrown back under the train, receiving a cut over the eye and other injuries about the head and body.

January 4, 1889. — At Nashua, Alva Tatro, a brakeman, had his foot caught and crushed by some railroad rails slipping, on account of the concussion of cars coming together, in the act of coupling.

January 28. — At Nashua, Harrington Kennedy, a brakeman, coupling cars in the yard, had two fingers cut off.

March 6. — At Nashua, Willie Owens, a trespasser, a child of five years, attempting to cross the tracks in front of an advancing train, was struck, and had his leg broken and was injured about the head.

March 29. — At Nashua Junction, Frank N. Spaulding, an employé, fell from the top of a car, breaking his leg and ankle.

April 4. — At Rochester, Leon Larry, a trespasser, walking on the tracks, was struck by a passing train, receiving injuries from which he soon afterward died.

April 19. — At Nashua, Walter H. Burt, an employé, slipped from the top of a car to the ground, receiving scalp wound and injuries to shoulder.

May 23. — At Nashua, Thomas J. Hines, a trespasser intoxicated, climbed to the top of a box car and fell off, cracking his shoulder blade and cutting open his head.

June 1. — At Nashua, John Hughes, colored, a trespasser, standing on the tracks, was struck by a passing train and killed.

June 3. — At Concord, Charles W. Morrison, machinist Northern Railroad shop, in assisting in lowering a pair of wheels with derrick, crank slipped from his hands, striking him on the head below temple, causing concussion of the brain, etc., from which he died in a few hours.

June 4. — At Concord, Godfrey Bourdon, a trespasser, stepped on the tracks in front of a passing train and was killed.

June 5. — At Lebanon, Joseph Gerrish, a boy, was struck and knocked down by a mail bag thrown from a moving train as it entered the station; injuries slight.

June 22. — At Milford, Mrs. Betsey Shaw, an elderly woman, attempting to cross the tracks at Union street crossing, in front of an approaching train, was struck, receiving injuries from which she soon afterwards died.

GENERAL INFORMATION.		
Maximum weight of locomotives in working order	58	tons.
Average " " " "	34	"
Maximum weight of tenders full of fuel and water	42½	"
Average " " " "	23	"

Maximum weight of passenger cars . . .	28¾ tons.
Average " " " . . .	22 "
" " mail and baggage cars . .	19 "
" " 8-wheel box freight cars .	9½ "
" " 4-wheel " " . .	4½ "
" " 8-wheel platform cars . .	7½ "
" " 4-wheel " " . .	3¾ "
Length of heaviest engine and tender, from center of forward truck-wheel of engine to center of rear wheel of tender	46 11/12 feet.
Total length of heaviest engine and tender over all	58 "
Number of locomotives equipped with train brake [Kind of brake, Westinghouse automatic.]	243
Number of cars equipped with train brake . . [Kind of brake, Westinghouse automatic.]	817
Number of passenger cars with Miller platform and buffer	765
Number of miles of road operated by this company not furnished with telegraph facilities: . . From Bradford to Georgetown, Mass.	6.50 miles.

BRIDGES.

Number of trestle bridges of 25 feet length and upwards *	1
Aggregate length of same for single track 68 ft.	
Number of spans of stone bridges of 25 feet and upwards *	1
Aggregate length of same for double track 38 ft.	
Number of spans of iron bridges of 25 feet and upwards *	9
Aggregate length of same for single track 176 ft.	
" " " double track 668 ft.	
Number of crossings of highways at grade * .	43
" " " over railroad .	9
" " " under railroad .	3
Number of highway bridges 18 feet above track .	1
Number of highway bridges less than 18 feet above track	8
Number of crossings at which gates or flagmen are maintained	16
Number of crossings at which there are neither signals nor flagmen *	27
Number of railroad crossings at grade: * . . Concord R. R., at Newmarket Junction.	1
Number of railroad crossings over other railroads:* Portsmouth, Great Falls & Conway R. R., at Salmon Falls.	1

* In New Hampshire, on miles of road owned.

RATES OF FARE, ETC.	
Average rate of fare per mile (not including season tickets) for local passengers on roads operated by this company *	1.996 cents.
Average rate of fare per mile received from passengers to and from other roads	1.814 "
Average rate of fare per mile for season-ticket passengers †	.726 "
Average rate of fare per mile received from all passengers	1.784 "
Average rate of local freight per ton per mile *	2.638 "
Average rate of freight per ton per mile received from freight to and from other roads	1.322 "
Average rate of freight per ton per mile received from all freight	1.855 "

CAPITAL STOCK.		
Capital stock authorized by charter	$7,000,000	
Capital stock authorized by votes of company	7,000,000	
Capital stock issued (number of shares, 70,000); amount paid in		$7,000,000.00
Total amount paid in (as per books of the company)		7,000,000.00
Total number of stockholders	3,877	
Number of stockholders in New Hampshire	1,039	
Amount of stock held in New Hampshire	$1,346,800	

DEBT.		
Funded debt, as follows:		
Bonds due January 1, 1893; rate of interest, 7 per cent		$1,500,000.00
Interest accrued on same during nine months	$78,750.00	
Bonds due January 1, 1894; rate of interest, 7 per cent		2,000,000.00
Interest accrued on same during nine months	$105,000.00	
Improvement bonds due February 2, 1905; rate of interest, 4 per cent		1,000,000.00
Interest accrued on same during nine months	$30,000.00	
Improvement bonds due February 1, 1907; rate of interest, 4 per cent		500,000.00

* Rates as per tariff.

† Reckoning twelve passengers per week for time of each season ticket.

Interest accrued on same during nine months	$15,000.00	
Improvement bonds due February 1, 1937; rate of interest, 4 per cent		$1,484,000.00
Interest accrued on same during nine months	$37,101.22	
Total amount of funded debt		$6,484,000.00

NAMES AND RESIDENCES OF OFFICERS.

George C. Lord, *President*, Newton, Mass.; James T. Furber, *General Manager*, Lawrence, Mass.; William J. Hobbs, *General Auditor*, Malden, Mass.; *Superintendents* — William Merritt, Western Division, Boston, Mass.; D. W. Sanborn, Eastern Division, Somerville, Mass.; John W. Sanborn, Northern Division, Wolfeborough Junction, N. H.; George W. Hurlburt, Worcester, Nashua & Portland Division, Worcester, Mass.; W. F. Simons, Southern Division, Somerville, Mass.; H. E. Folsom, Passumpsic Division, Lyndonville, Vt.; George E. Todd, Northern R. R., Concord, N. H.; D. J. Flanders, *General Passenger and Ticket Agent*, Malden, Mass.; W. F. Berry, *General Freight Agent*, East Boston, Mass.; Amos Blanchard, *Treasurer*, Andover, Mass.; Chauncey P. Judd, *Clerk of Corporation*, Reading, Mass.

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

George C. Lord, Newton, Mass.; Amos Paul, South Newmarket, N. H.; William S. Stevens, Dover, N. H.; Joseph S. Ricker, Deering, Me.; Richard Olney, William T. Hart, Boston, Mass.; Samuel C. Lawrence, Medford, Mass.; Frank Jones, Portsmouth, N. H.

PROPER ADDRESS OF THE COMPANY.

BOSTON & MAINE RAILROAD,

BOSTON, MASS.

FRANK JONES,
GEORGE C. LORD,
JOSEPH S. RICKER,
WILLIAM S. STEVENS,
WILLIAM T. HART,
RICHARD OLNEY,
Directors.

AMOS BLANCHARD,
Treasurer.
JAMES T. FURBER,
General Manager.

COMMONWEALTH OF MASSACHUSETTS.

SUFFOLK ss. BOSTON, February 21, 1890. Then personally appeared the above named James T. Furber, Frank Jones, and Amos Blanchard, and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

SIGOURNEY BUTLER,
Justice of the Peace.

REPORT

OF THE

MANCHESTER & LAWRENCE RAILROAD COMPANY

FOR THE NINE MONTHS ENDING JUNE 30, 1889.

GENERAL EXHIBIT FOR NINE MONTHS.		
Total income, proportionate		$78,862.95
Total expense (including taxes)		2,583.03
Net income		76,279.92
Dividends declared (7½ per cent), proportionate		75,000.00
Balance for the nine months (surplus)		1,279.92
Balance at commencement of year	$116,060.50	
Add	1,577.50	
Balance at commencement of year as so changed		117,638.00
Balance June 30, 1889		118,917.92

ANALYSIS OF EARNINGS.		
Rents for use of road, proportionate		$76,500.00
Income from all other sources, viz.:		2,362.95
Interest	$2,362.95	
Total income from all sources		$78,862.95

ANALYSIS OF EXPENSES.	
Salaries of general officers and clerks	$1,600.00
Legal expenses	871.53
Stationery, printing, and advertising	91.50
Contingencies and miscellaneous	20.00
Total operating expenses	$2,583.03

BALANCE-SHEET, JUNE 30, 1889.

ASSETS.

Cost of road and equipment	$1,000,000.00	
Telegraph	4,770.35	
Hooksett Branch	18,000.00	
Stock of Suncook Valley R. R.	42,040.00	
Stock of Mt. Washington R. R.	3,700.00	
Total permanent investments		$1,068,510.35
Cash	$25,087.07	
Concord, Manchester & Lawrence R. R.	32,000.00	
Total cash assets		57,087.07
Total assets (as per books of the company)		$1,125,597.42

LIABILITIES.

Capital stock	$1,000,000.00
Dividends unpaid	6,679.50
Profit and loss balance	118,917.92
Total liabilities (as per books of the company)	$1,125,597.42

CAPITAL STOCK.

Capital stock authorized by charter	$1,000,000	
Capital stock authorized by votes of company	1,000,000	
Capital stock issued (number of shares, 10,000)		$1,000,000.00
Total number of stockholders	569	
Number of stockholders in New Hampshire	323	
Amount of stock held in New Hampshire	$565,500	

NAMES AND RESIDENCES OF OFFICERS.

Charles A. Sinclair, *President*, Portsmouth, N. H.; Henry Chandler, *Treasurer*, Manchester, N. H.; Charles B. Gafney, *Clerk of Corporation*, Rochester, N. H.

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

Charles A. Sinclair, Portsmouth, N. H.; George B. Chandler, Herman F. Straw, Manchester, N. H.; Joseph C. Moore, Gilford,

N. H.; John W. Sanborn, Wakefield, N. H.; Elisha R. Brown, Dover, N. H.; William P. Fowler, Boston, Mass.

CHARLES A. SINCLAIR,
JOHN W. SANBORN,
GEORGE B. CHANDLER,
ELISHA R. BROWN,
Directors.
HENRY CHANDLER,
Treasurer.

COMMONWEALTH OF MASSACHUSETTS.

SUFFOLK SS. BOSTON, October 25, 1890. Then personally appeared Charles A. Sinclair, John W. Sanborn, G. B. Chandler, and E. R. Brown, a majority of the directors of the Manchester & Lawrence Railroad Company, and Henry Chandler, treasurer thereof, and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

WILLIAM P. FOWLER,

Justice of the Peace and Commissioner for the State of New Hampshire, resident in the Commonwealth of Massachusetts.

REPORT

OF THE

NASHUA & LOWELL RAILROAD COMPANY

FOR THE NINE MONTHS ENDING JUNE 30, 1889.

GENERAL EXHIBIT FOR NINE MONTHS.		
Total income		$82,622.55
Total expense (including taxes B. & M. R. R.)		1,585.00
Net income		81,037.55
Interest accrued during year:		8,510.83
On funded debt	$8,500.00	
On other debt	10.83	
Dividends declared (9 per cent)		72,000.00
Balance for the year		526.72
Balance at commencement of year	$120,065.03	
Deduct $1,000 paid for legal expenses	1,000.00	
Balance at commencement of year as so changed		119,065.03
Balance June 30, 1889		119,065.03

ANALYSIS OF EARNINGS.		
Rents for use of road		$73,000.00
Income from all other sources, viz.:		9,622.55
Interest on notes, $300,000	$8,500.00	
Interest on stock, 80 shares Union Loan & Trust Co., Sioux City, Ia.	800.00	
Miscellaneous income	322.55	
Total income from all sources		$82,622.55

ANALYSIS OF EXPENSES.	
Salaries of general officers and clerks	$546.15
Legal expenses	1,000.00
Contingencies and miscellaneous	38.85
Total operating expenses and taxes	$1,585.00

BALANCE-SHEET, JUNE 30, 1889.

ASSETS.

Cost of road	$691,292.07	
Cost of equipment	218,242.95	
Total permanent investments		$909,535.02
Cash	$4,242.01	
Bills receivable	300,000.00	
Due from agents and companies (accrued interest on $300,000 notes)	5,000.00	
Sinking fund	11,111.50	
Total cash assets		320,353.51
Total assets (as per books of the company)		$1,229,888.53

LIABILITIES.

Capital stock		$800,000.00
Funded debt		300,000.00
Unfunded debt, viz.		10,823.50
Interest unpaid, coupons unpaid	$3,631.00	
Dividends unpaid	2,192.50	
Accrued interest on funded debt, not yet payable	5,000.00	
Profit and loss balance		119,065.03
Total liabilities (as per books of the company)		$1,229,888.53

DESCRIPTION OF ROAD.

Main line of road from Nashua to Lowell	14.500 miles.
" " in New Hampshire	5.250 "
" " in Massachusetts	9.250 "
Double track on main line	14.500 "
Same in New Hampshire	5.250 "
Total road belonging to this company	14.500 "
Sidings and other tracks not above enumerated	6.084 "
Same in New Hampshire	1.950 "
Total length of track computed as single track	35.084 "
Same in New Hampshire	12.450 "

CAPITAL STOCK.

Capital stock authorized by charter	$800,000	
Capital stock issued (number of shares, 8,000); amount paid in		$800,000.0
Total amount paid in (as per books of the company)		800,000.0

Total number of stockholders . . .	395	
Number of stockholders in New Hampshire .	180	
Amount of stock held in New Hampshire	$231,500	

DEBT.

Funded debt, as follows:		
Gold bonds due August 3, 1893; rate of interest, 6 per cent		$200,000.00
Bonds due July 1, 1900; rate of interest, 5 per cent		100,000.00
Interest paid on same during nine months	$5,000	

NAMES AND RESIDENCES OF OFFICERS.

Francis A. Brooks, *President*, Boston, Mass.; J. W. White, *Treasurer*, Nashua, N. H., Walter A. Lovering, *Clerk of Corporation*, Nashua, N. H.

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

Francis A. Brooks, Gedney K. Richardson, Boston, Mass.; Jeremiah W. White, William W. Bailey, Nashua, N. H.; C. E. A. Bartlett, Lowell, Mass.

PROPER ADDRESS OF THE COMPANY.

NASHUA & LOWELL RAILROAD CORPORATION,

NASHUA, N. H.

J. W. WHITE,
Treasurer.

STATE OF NEW HAMPSHIRE.

HILLSBOROUGH ss. July 11, 1890. Then personally appeared J. W. White and made oath to the truth of the foregoing statement by him subscribed, according to his best knowledge and belief.

F. A. EATON,
Justice of the Peace.

REPORT

OF THE

PORTSMOUTH & DOVER RAILROAD COMPANY *

FOR THE NINE MONTHS ENDING JUNE 30, 1889.

GENERAL EXHIBIT FOR NINE MONTHS.		
Total income		$46,140.00
Net income		46,140.00
Dividends declared (6 per cent)		46,140.00

BALANCE-SHEET, JUNE 30, 1889.		
ASSETS.		
Cost of road	$768,400.00	
Total permanent investments		$768,400.00
Cash	$237.00	
Bills receivable	600.00	
Total cash assets		837.00
Total assets (as per books of the company)		$769,237.00
LIABILITIES.		
Capital stock		$769,000.00
Unfunded debt, viz.:		237.00
Dividends unpaid	$237.00	
Profit and loss balance		3,204.79
Total liabilities (as per books of the company)		$772,441.79

* The Portsmouth & Dover Railroad is leased to the Eastern Railroad in New Hampshire at 6 per cent on $769,000 per annum.

DESCRIPTION OF ROAD.	
Number of stations in New Hampshire on all roads operated by this company	5
Number of stations on all roads owned by this company	5
Same in New Hampshire	5

BRIDGES.	
Number of trestle bridges of 25 feet length and upwards *	1
Aggregate length of same for single track 94 ft.	
Number of spans of stone bridges of 25 feet and upwards *	94
Number of spans of iron bridges of 25 feet and upwards *	7
Aggregate length of same for single track 620 ft.	
Number of spans of timber bridges of 25 feet and upwards *	620
Number of crossings of highways at grade *	10
" " " over railroad	1
Number of highway bridges less than 18 feet above track	1
Number of crossings at which gates or flagmen are maintained	4
Number of crossings at which there are neither signals nor flagmen *	6

CAPITAL STOCK.	
Capital stock authorized by charter $769,000	
Capital stock authorized by votes of company 769,000	
Capital stock issued (number of shares, 7,690); amount paid in	$769,000.00
Total amount paid in (as per books of the company)	769,000.00
Total number of stockholders 151	
Number of stockholders in New Hampshire 140	
Amount of stock held in New Hampshire $753,600	

NAMES AND RESIDENCES OF OFFICERS.

Frank Jones, *President*, Portsmouth, N. H.; George L. Treadwell, *Treasurer*, Portsmouth, N. H.; Calvin Page, *Clerk of Corporation*, Portsmouth, N. H.

* In New Hampshire, on miles of road owned.

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

Frank Jones, Daniel Marcy, Joseph A. Walker, George E. Hodgdon, Portsmouth, N. H.; Joseph D. Guppy, Frank A. Christie, George G. Lowell, Dover, N. H.

PROPER ADDRESS OF THE COMPANY.

PORTSMOUTH & DOVER RAILROAD,

PORTSMOUTH, N. H.

FRANK JONES, *President.*
GEORGE L. TREADWELL,
Treasurer.

STATE OF NEW HAMPSHIRE.

ROCKINGHAM ss. June 21, 1890. Then personally appeared Frank Jones, president of the Portsmouth & Dover Railroad, and George L. Treadwell, its treasurer, and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

CALVIN PAGE,
Justice of the Peace.

REPORT

OF THE

WORCESTER, NASHUA & ROCHESTER RAILROAD COMPANY*

FOR THE NINE MONTHS ENDING JUNE 30, 1889.

GENERAL EXHIBIT.		
Total income †		$187,500.00
Total expense (including taxes)†		1,277.68
Net income †		186,222.32
Interest accrued during year : †		65,132.45
On funded debt	$53,687.50	
On other debt	11,444.95	
Dividends declared (4½ per cent)†		137,884.50
Balance for nine months (deficit)†		16,794.63
Balance at commencement of year (deficit)	$233,296.56	
Add:		
Deficit for the year	22,392.85	
Paid on account of old claims	4,127.87	
Balance June 30, 1889 (deficit)		259,817.28

ANALYSIS OF EARNINGS.	
Rents for use of road	$187,500.00
Total income from all sources	187,500.00

* The railroad and rolling stock of this company is operated under a lease to the Boston & Maine Railroad, and questions relating to the operation of the same will be included in their report.

† Answers to these questions are estimated at three fourths the amounts received and paid out during the year ending June 30, 1889.

BALANCE-SHEET, JUNE 30, 1889.

ASSETS.

Cost of road	$4,138,584.99	
Cost of equipment	415,336.03	
Total permanent investments		$4,553,921.02
Cash	$2,502.07	
Due from agents and companies	280.46	
353 shares Worcester, Nashua & Rochester R. R. stock	35,300.00	
Total cash assets		38,082.53
Profit and loss balance		259,817.28
Total assets (as per books of the company)		$4,851,820.83

LIABILITIES.

Capital stock		$3,099,800.00
Funded debt		1,365,000.00
Unfunded debt, viz.:		387,020.83
Interest unpaid	$6,500.00	
Interest accrued on bonds not due	18,520.83	
Notes payable	362,000.00	
Total liabilities (as per books of the company)		$4,851,820.83

Present or Contingent Liabilities not Included in the Balance-Sheet.

Bonds guaranteed by this company, or a lien on its road*	565,000.00

DESCRIPTION OF ROAD.

Main line of road from Worcester to Rochester	94.48 miles.
" " in New Hampshire	55.02 "
" " in Massachusetts	39.46 "
Double track on main line	18.13 "
Total road belonging to this company	94.48 "
Sidings and other tracks not above enumerated	29.47 "
Same in New Hampshire	13.22 "
Total length of track computed as single track	142.08 "
Same in New Hampshire	68.24 "
Total length of steel rails in tracks, not including steel-top rails	89.00 "
[Weight per yard, 58 to 60 lbs.]	

* These bonds were issued by the Nashua & Rochester Railroad, and are secured by a mortgage upon the Worcester Railroad, and are included in the funded debt of the Worcester, Nashua & Rochester Railroad Company.

BRIDGES.		
Number of trestle bridges of 25 feet length and upwards *		14
Aggregate length of same for single track	1,398.14 ft.	
Number of spans of timber bridges of 25 feet and upwards *		15
Number of crossings of highways at grade *		98
" " " over railroad		3
" " " under railroad		2
Number of highway bridges 18 feet above track		3
Number of highway bridges less than 18 feet above track		2
Number of crossings at which gates or flagmen are maintained. †		
Number of crossings at which electric signals are maintained. †		
Number of crossings at which there are neither signals nor flagmen. *		
Number of railroad crossings at grade: *		3
Nashua & Lowell, at Nashua.		
Manchester & Lawrence.		
Portsmouth & Concord.		
CAPITAL STOCK.		
Capital stock authorized by charter	$3,600,000	
Capital stock authorized by votes of company	3,099,800	
Capital stock issued (number of shares, 30,998); amount paid in		$3,099,800.00
Total amount paid in (as per books of the company)		3,099,800.00
Total number of stockholders	820	
Number of stockholders in New Hampshire	172	
Amount of stock held in New Hampshire	$504,500	
Amount owned in New Hampshire, and held out of the State	463,400	
DEBT.		
Funded debt, as follows:		
Mortgage bonds due April 1, 1893; rate of interest, 5 per cent		$250,000.00
Interest paid on same during nine months	$9,375.00	
Mortgage bonds due February 1, 1895; rate of interest, 5 per cent		400,000.00

* In New Hampshire, on miles of road owned.

† Will be answered by the Boston & Maine Railroad.

Interest paid on same during nine months	$15,000.00	
Mortgage bonds due April 1, 1894; rate of interest, 5 per cent		$565,000.00
Interest paid on same during nine months	$18,478.13	
Mortgage bonds due July 1, 1906; rate of interest, 4 per cent		150,000.00
Interest paid on same during nine months	$4,500.00	
Total amount of funded debt		$1,365,000.00

NAMES AND RESIDENCES OF OFFICERS.

James P. Cook, *President*, Salem, Mass.; Elijah B. Stoddard, *Auditor*, Worcester, Mass.; T. W. Hammond, *Treasurer*, Worcester, Mass.; T. W. Hammond, *Clerk of Corporation*, Worcester, Mass.

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

James P. Cook, Salem, Mass.; Charles A. Sinclair, Frank Jones, Portsmouth, N. H.; George C. Lord, Newton, Mass.; George W. Armstrong, Brookline, Mass.; Elijah B. Stoddard, Worcester, Mass.; John A. Spalding, Frank A. McKean, Charles Holman, Nashua, N. H.

PROPER ADDRESS OF THE COMPANY.

THE WORCESTER, NASHUA & ROCHESTER RAILROAD COMPANY,

WORCESTER, MASS.

J. P. COOK,
GEORGE W. ARMSTRONG,
E. B. STODDARD,
FRANK A. McKEAN,
JOHN A. SPALDING,
Directors.
T. W. HAMMOND, *Treasurer.*

STATE OF NEW HAMPSHIRE.

HILLSBOROUGH ss. August 6, 1890. Then personally appeared Frank A. McKean and John A. Spalding, and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

Before me,

E. M. BOWMAN,

Justice of the Peace.

COMMONWEALTH OF MASSACHUSETTS.

SUFFOLK ss. July 28, 1890. Then personally appeared James P. Cook, George W. Armstrong, and T. W. Hammond, and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

HENRY T. GOOLD,

Justice of the Peace.

WORCESTER ss. August 8, 1890. Then personally appeared Elijah B. Stoddard, and made oath to the truth of the foregoing statement, according to his best knowledge and belief.

J. STEWART BROWN,

Justice of the Peace.

REPORT

OF THE

CHESHIRE RAILROAD COMPANY

FOR THE NINE MONTHS ENDING JUNE 30, 1889.

GENERAL EXHIBIT FOR NINE MONTHS.		
Total income		$455,091.29
Total expense (including taxes)		318,302.51
Net income		136,788.78
Rentals:		38,250.00
Fitchburg R. R. for V. & M. Div.	$38,250.00	
Interest accrued during year:		24,000.00
On funded debt July, 1889	$24,000.00	
Dividends declared (3 per cent, January, 1889)		63,000.00
Balance for the year (surplus)		11,538.78
Balance at commencement of year	$58,554.98	
Deduct bal. Monadnock R. R. acct.	21,731.85	
Balance at commencement of year as so changed		36,823.13
Balance June 30, 1889 (surplus)		48,361.91

ANALYSIS OF EARNINGS.	
From local passengers (all passengers starting from or stopping at any station on this road) *	$35,212.75
From through passengers (to and from other roads over and beyond this road)	82,406.87
From express	5,625.00
From mails	7,125.03
From other sources, passenger department F. R. R. car service	5,625.00
Total earnings from passenger department	135,994.65
From local freight (all freight starting from or stopping at any station on this road) *	18,629.49
From through freight (to and from other roads over and beyond this road)	288,021.35

* Including passengers and freight to and from other roads starting from or stopping at stations on this road.

Total earnings from freight department		$306,650.81
Total transportation earnings		442,645.46
Income from all other sources, viz.:		12,445.83
Miscellaneous	$9,280.81	
Interest	3,165.02	
Total income from all sources		$455,091.29

ANALYSIS OF EXPENSES.

Salaries of general officers and clerks	$13,276.31
Legal expenses	1,381.04
Insurance	1,646.87
Stationery and printing	1,688.53
Outside agencies and advertising	3,760.37
Contingencies and miscellaneous	1,734.88
Repairs of bridges (including culverts and cattle-guards)	2,141.86
Repairs of buildings	8,286.94
Repairs of fences, road-crossings, and signs	857.36
Renewal of rails	3,243.38
[No. tons steel laid, 101.]	
Renewal of ties	8,484.01
[No. laid, 21,347.]	
Repairs of roadbed and track	33,857.09
Repairs of locomotives	18,676.95
Fuel for locomotives	74,017.98
[Tons of coal, 16,935; cords of wood, 248.]	
Water supply	533.59
Oil and waste	4,233.89
Locomotive service *	29,193.46
Repairs of passenger cars	9,012.13
Passenger-train service *	8,105.40
Passenger-train supplies	899.01
Mileage passenger cars †	3,068.56
Repairs of freight cars	18,593.56
Freight-train service *	21,255.88
Freight-train supplies	1,206.76
Mileage freight cars †	16,711.59
Telegraph expenses	2,988.30
Loss and damage, freight and baggage	98.98
Loss and damage, property and cattle	344.75
Personal injuries	2,121.00
Agents' and station service *	23,031.16
Station supplies	3,631.63
Total operating expenses	$318,083.22
Taxes, local	219.29
Total operating expenses and taxes	$318,302.51

* Salaries and wages. † Debit balances.

BALANCE-SHEET, JUNE 30, 1889.

ASSETS.

Cost of road	$2,410,863.90	
Cost of equipment	335,996.32	
Total permanent investments		$2,746,860.22
Cash	$49,891.33	
Bills receivable	225,767.19	
Due from agents and companies	33,578.25	
Materials and supplies	95,323.92	
Total cash assets		404,560.69
Total assets (as per books of the company)		$3,151,420.91

LIABILITIES.

Capital stock		$2,153,300.00
Funded debt		800,000.00
Unfunded debt, viz.:		149,759.00
Interest unpaid (July, 1889, $24,000)	$24,600	
Dividends unpaid	159	
Notes payable	125,000	
Profit and loss balance		48,361.91
Total liabilities (as per books of the company)		$3,151,420.91

MILEAGE, TRAFFIC, ETC.

Passenger-train mileage		130,795
Freight-train mileage		291,842
Total revenue train mileage		422,637
Switching-train mileage		49,943
Other train mileage		14,012
Total train mileage		486,592
Number of season-ticket passengers *	5,034	
Number of local passengers (including season)		71,972
Number of through passengers (to and from other roads going over and beyond this road)		64,750
Total number of passengers carried		136,722
Local passenger mileage (local passengers carried one mile)		1,260,289
Through passenger mileage (through passengers carried one mile)		2,709,312
Total passenger mileage		3,969,601
Number tons local freight		20,040
Number tons through freight (to and from other roads going over and beyond this road)		478,596

* Reckoning twelve passengers per week for time of each season ticket.

Total number tons freight carried	498,636
Local freight mileage (tons local freight carried one mile)	464,265
Through freight mileage (tons through freight carried one mile) *	27,551,037
Total freight mileage	28,015,302
Average number of persons employed	365

DESCRIPTION OF ROAD.

Main line of road from Bellows Falls to Ashburnham Junction	53.62 miles.
Main line of road in New Hampshire	42.81 "
" " Massachusetts	10.81 "
Total road belonging to this company	53.62 "
Sidings and other tracks not above enumerated	17.29 "
Same in New Hampshire	14.12 "
Total length of track, computed as single track	70.91 "
Same in New Hampshire	56.93 "
Total length of steel rails in track, not including steel-top rails	53.62 "
[Weights per yard, 60 to 72 lbs.]	

Roads and Branches belonging to other Companies, operated by this Company under lease or contract.

Monadnock R. R., length	15.82 "
V. & M. Div., Fitchburg R. R., length	10.39 "
Total length of above roads	26.21 "
" " " in New Hampshire	13.75 "
" " " in Massachusetts	12.46 "
Total miles of road operated by this company	64.01 "
Total miles of road operated by this company in New Hampshire	42.81 "
Number of stations in New Hampshire on all roads operated by this company	14
Number of telegraph offices in same	10
Number of stations on all roads owned by this company	16
Same in New Hampshire	13

EQUIPMENT.

Number of locomotives	31
Number of passenger cars	27
Number of baggage, mail, and express cars	11
Number of freight cars (basis of 8 wheels)	440
Number of other cars	66

* Carried to and from other roads.

LIST OF ACCIDENTS.

	From causes beyond their own control (in New Hampshire).		From their own misconduct or carelessness (in New Hampshire).		Total in New Hampshire.		Total on whole road operated.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
Passengers.	.....	.....	.....	1	.....	1	.....	1
Employés ..	.....	1	.....	.....	.....	1	.....	3
Others.....	.....	.....	.....	.....	.....	.....		1

STATEMENT OF EACH ACCIDENT IN NEW HAMPSHIRE.

October 6, 1888. — Annie E. McIntyre, a passenger, in getting off the train while in motion at Marlborough, fell and was slightly injured.

November 24. — Fred E. Stanley, brakeman, fell from freight train near Surry Summit, not seriously injured.

GENERAL INFORMATION.		
Maximum weight of locomotives in working order	48	tons.
Average " " " "	34	"
Maximum weight of tenders full of fuel and water	25	"
Average " " " "	19	"
Maximum weight of passenger cars . . .	20	"
Average " " . . .	18	"
" " mail and baggage cars . .	13½	"
" " 8-wheel box freight cars .	9½	"
" " 8-wheel platform cars . .	7½	"
Length of heaviest engine and tender, from center of forward truck-wheel of engine to center of rear wheel of tender	46½	feet.
Total length of heaviest engine and tender over all	55	"
Number of locomotives equipped with train brake . [Kind of brake, Westinghouse.]	8	
Number of cars equipped with train brake . . [Kind of brake, Westinghouse.]	38	

Number of passenger cars with Miller platform and buffer	38
Number of miles of road operated by your company not furnished with telegraph facilities: . . From Peterborough, N. H., to Winchendon, Mass.	15 8-10
Charges for the transportation of company's supplies, at the rate of ½ cent per ton per mile, are included in the earnings as reported for this road.	

BRIDGES.

Number of spans of stone bridges of 25 feet and upwards *	1
Number of spans of iron bridges of 25 feet and upwards *	2
Number of spans of timber bridges of 25 feet and upwards *	11
Number of crossings of highways at grade * . .	33
" " " over railroad .	6
" " " under railroad .	5
Number of highway bridges 18 feet above track .	8
Number of crossings at which gates or flagmen are maintained	2
Number of crossings at which there are neither signals nor flagmen *	31

RATES OF FARE, ETC.

Average rate of fare per mile (not including season tickets) for local passengers on roads operated by this company †	3.500 cents.
Average rate of fare per mile received from passengers to and from other roads	3.100 "
Average rate of fare per mile for season-ticket passengers ‡	1.200 "
Average rate of fare per mile received from all passengers	2.800 "
Average rate of local freight per ton per mile † .	0.500 "
Average rate of freight per ton per mile received from freight to and from other roads . . .	1.450 "
Average rate of freight per ton per mile received from all freight	1.090 "

CAPITAL STOCK.

Total amount paid in (as per books of the company)	$2,153,300.00
Total number of stockholders 466	
Number of stockholders in New Hampshire . 39	
Amount of stock held in New Hampshire $344,400	

* In New Hampshire, on miles of road owned. † Rates as per tariff.
‡Reckoning twelve passengers per week for time of each season ticket.

DEBT.		
Funded debt, as follows:		
Bonds, due July 1, 1896; rate of interest, 6 per cent		$250,000.00
Interest paid on same during nine months	$7,500.00	
Bonds due July 1, 1898; rate of interest, 6 per cent		550,000.00
Interest paid on same during nine months	$16,500.00	
Total amount of funded debt . . .		$800,000.00

NAMES AND RESIDENCES OF OFFICERS.

William A. Russell, *President*, Boston, Mass.; Edward C. Thayer, *Vice-President*, R. Stewart, *General Manager*, J. W. Dodge, *General Freight Agent*, F. H. Kingsbury, *General Passenger Agent*, F. H. Kingsbury, *Treasurer*, R. Stewart, *Clerk of Corporation*, Keene, N. H.

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

William A. Russell, George W. Russell, H. W. Suter, William H. Hill, A. N. Burbank, Boston, Mass.; D. L. C. Ball, Edward C. Thayer, Keene, N. H.

PROPER ADDRESS OF THE COMPANY.

CHESHIRE RAILROAD COMPANY,

KEENE, N. H.

EDWARD C. THAYER,
Vice-President.
F. H. KINGSBURY,
Treasurer.
R. STEWART,
Clerk of Corporation.

STATE OF NEW HAMPSHIRE.

CHESHIRE ss. March 3, 1890. Then personally appeared Edward C. Thayer, R. Stewart, and F. H. Kingsbury and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

CLARK F. ROWELL,

Justice of the Peace.

REPORT

OF THE

LESSEES OF THE MONADNOCK RAILROAD

FOR THE NINE MONTHS ENDING JUNE 30, 1889.

GENERAL EXHIBIT FOR NINE MONTHS.		
Total income		$23,644.25
Total expense (including taxes)		17,802.49
Net income		5,841.76
Rentals for use of road		9,000.00
Balance for the year (deficit)		3,158.24
Balance at commencement of year	$18,281.13	
Add deficit this year	3,158.24	
Deduct charge to profit and loss acct. with Cheshire R. R.	21,439.27	

ANALYSIS OF EARNINGS.		
From local passengers (all passengers starting from or stopping at any station on this road) *		3,207.62
From through passengers (to and from other roads over and beyond this road)		4,811.42
From express and extra baggage		750.00
From mails		531.63
Total earnings from passenger department		9,300.67
From local freight (all freight starting from or stopping at any station on this road) *		4,930.54
From through freight (to and from other roads over and beyond this road)		9,143.04
Total earnings from freight department		14,073.58
Total transportation earnings		23,374.25
Income from all other sources, viz.:		270.00
Miscellany	$270.00	
Total income from all sources		$23,644.25

* Including passengers and freight to and from other roads starting from or stopping at stations on this road.

ANALYSIS OF EXPENSES.	
Salaries of general officers and clerks	$900.00
Stationery and printing	225.00
Outside agencies and advertising	20.00
Contingencies and miscellaneous	2.50
Repairs of bridges (including culverts and cattle-guards)	123.91
Repairs of buildings	89.87
Repairs of fences, road-crossings, and signs	213.87
Renewal of ties	983.25
Repairs of roadbed and track	5,056.12
Repairs of locomotives	394.26
Fuel for locomotives	3,155.74
[Tons of coal, 757.]	
Water supply	101.00
Oil and waste	228.15
Locomotive service *	1,236.35
Repairs of passenger cars	734.67
Passenger-train service *	557.50
Passenger-train supplies	90.12
Repairs of freight cars	69.94
Freight-train service *	824.44
Mileage freight cars †	601.33
Loss and damage, property and cattle	291.00
Agents' and station service *	1,841.15
Station supplies	42.32
Total operating expenses	$17,782.49
Taxes, local	20.00
Total operating expenses and taxes	$17,802.49

MILEAGE, TRAFFIC, ETC.	
Passenger-train mileage	13,322
Freight-train mileage	6,660
Total revenue train mileage	19,982
Total train mileage	19,982
Number of local passengers (including season)	10,949
Number of through passengers (to and from other roads going over and beyond this road)	9,078
Total number of passengers carried	20,027
Local passenger mileage (local passengers carried one mile)	109,755
Through passenger mileage (through passengers carried one mile)	108,926
Total passenger mileage	218,681
Number tons local freight	3,733

* Salaries and wages. † Debit balances.

Number tons through freight (to and from other roads going over and beyond this road) . .	26,225
Total number tons freight carried . . .	29,958
Local freight mileage (tons local freight carried one mile)	41,352
Through freight mileage (tons through freight carried one mile) *	400,383
Total freight mileage	441,735
Average number of persons employed . . .	25

DESCRIPTION OF ROAD.

Main line of road from Winchendon to Peterboro'	15.800 miles.
Main line of road in New Hampshire . . .	13.762 "
" " Massachusetts . . .	2.038 "
Total road belonging to this company . . .	15.800 "
Sidings and other tracks not above enumerated .	.700 "
Same in New Hampshire	.700 "
Total length of track, computed as single track .	16.500 "
Same in New Hampshire	14.462 "
Total length of steel rails in tracks, not including steel-top rails	6 "
[Weight per yard, 60 lbs.]	

GENERAL INFORMATION.

Number of locomotives equipped with train brake . [Kind of brake, Westinghouse.]	1
Number of cars equipped with train brake . . [Kind of brake, Westinghouse.]	2
Number of passenger cars with Miller platform and buffer	1
Number of miles of road operated by this company not furnished with telegraph facilities: . . From Winchendon to Peterborough.	15.8 miles.
Charges for the transportation of company's supplies at one half cent per ton per mile included in the earnings as reported for this road; amount carried very small.	

BRIDGES.

Number of crossings of highways at grade † . .	1

* Carried to and from other roads. † In New Hampshire, on miles of road owned.

RATES OF FARE, ETC.	
Average rate of fare per mile (not including season tickets) for local passengers on roads operated by this company *	4.000 cents.
Average rate of fare per mile received from passengers to and from other roads	4.400 "
Average rate of fare per mile received from all passengers	3.660 "
Average rate of local freight per ton per mile * .	8.000 "
Average rate of freight per ton per mile received from freight to and from other roads . . .	2.180 "
Average rate of freight per ton per mile received from all freight	3.500 "

EDWARD C. THAYER,
Vice-President.
F. H. KINGSBURY,
Treasurer.
R. STEWART,
Superintendent.

STATE OF NEW HAMPSHIRE.

CHESHIRE SS. March 3, 1890. Then personally appeared Edw. C. Thayer, R. Stewart, and F. H. Kingsbury, and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

CLARK F. ROWELL,
Justice of the Peace.

* Rates as per tariff.

REPORT

OF THE

FITCHBURG RAILROAD COMPANY

FOR THE NINE MONTHS ENDING JUNE 30, 1889.

GENERAL EXHIBIT FOR NINE MONTHS.		
Total income		$4,166,365.88
Total expense (including taxes)		3,340,617.47
Net income		825,748.41
Rentals:		210,960.00
Vermont & Mass. R. R.	$183,435	
Boston & Albany R. R.	3,825	
Boston & Maine R. R.	2,700	
Cheshire Railroad	450	
Southern Vermont R. R.	9,000	
Troy & Bennington R. R.	11,550	
Interest accrued during year:		578,724.22
On funded debt	$576,948.08	
On other debt	1,776.14	
Balance for the year (surplus)		36,064.19
Balance at commencement of year	$266,149	
Deduct claim against old corporation paid	16,000	
Balance at commencement of year as so changed		250,149.00
Balance June 30, 1889 (surplus)		286,213.19

ANALYSIS OF EARNINGS.	
From local passengers (all passengers starting from or stopping at any station on this road)*	$886,858.02
From through passengers (to and from other roads over and beyond this road)	265,905.16
From express and extra baggage	89,476.88
From mails	32,776.57

* Including passengers and freight to and from other roads starting from or stopping at stations on this road.

From other sources, passenger department		$19,905.11
Total earnings from passenger department		1,294,921.74
From local freight (all freight starting from or stopping at any station on this road)*		749,002.26
From through freight (to and from other roads over and beyond this road)		1,878,085.84
From other sources, freight department		42,827.37
Total earnings from freight department		2,669,915.47
Total transportation earnings		3,964,837.21
Rents for use of road		43,875.00
Income from all other sources, viz.:		157,653.67
Rent of property	$32,016.40	
Elevators, wharves, etc.	122,919.27	
Miscellaneous	2,718.00	
Total income from all sources		$4,166,365.88

ANALYSIS OF EXPENSES.

Salaries of general officers and clerks	$103,883.09
Legal expenses	20,828.53
Insurance	26,112.77
Stationery and printing	30,972.24
Outside agencies and advertising	55,172.01
Contingencies and miscellaneous	21,175.80
Repairs of bridges (including culverts and cattle-guards)	43,771.00
Repairs of buildings	105,309.82
Repairs of fences, road-crossings, and signs	14,187.34
Renewal of rails	34,114.10
Renewal of ties	97,163.80
Repairs of roadbed and track	329,846.52
Repairs of locomotives	188,458.54
Fuel for locomotives	417,228.32
Water supply	17,735.15
Oil and waste	19,211.53
Locomotive service †	360,417.81
Repairs of passenger cars	78,210.62
Passenger-train service †	109,134.07
Passenger-train supplies	13,371.33
Mileage passenger cars ‡	16,084.76
Repairs of freight cars	179,223.45
Freight-train service †	279,275.97
Freight-train supplies	12,965.71
Mileage freight cars ‡	70,710.69
Telegraph expenses	56,813.27
Loss and damage, freight and baggage	9,465.40
Loss and damage, property and cattle	1,859.60
Personal injuries	44,666.30

* Including freight to and from other roads starting from or stopping at stations on this road.

† Salaries and wages. ‡ Debit balances.

Agents' and station service *		$408,325.83
Station supplies		36,123.11
Total operating expenses		$3,201,818.48
Taxes, state / Taxes, local		138,798.99
Total operating expenses and taxes		$3,340,617.47

PROPERTY ACCOUNTS: CHARGES AND CREDITS DURING THE NINE MONTHS.

Grading and masonry		$2,157.29
Superstructure, including rails		2,157.29
Passenger and freight stations, woodsheds, and water-stations		16,147.80
Purchase of other roads:		9,828.20
Troy & Greenfield R. R. and H. Tunnel	$7,328.20	
Boston, H. Tunnel & Western R. R.	2,500.00	
Construction not apportioned:		290,865.41
Improvements on Worcester, Tunnel, and Western division	$60,322.19	
New feight yards	29,415.09	
Shops, machinery, and tools	142,397.96	
Docks and elevators	58,730.17	
Total for construction		$321,155.99
Locomotives	$5,741.14	
Passenger, mail, and baggage cars	8,506.85	
Total for equipment		14,247.99
Other expenditures charged to property accounts:		368.75
Real estate	$368.75	
Total charges to property accounts		$335,772.73
Net additions to property accounts for the nine months		335,772.73

BALANCE-SHEET, JUNE 30, 1889.

ASSETS.

Cost of road	$32,741,185.20
Cost of equipment	3,539,896.99
Lands in Boston, Worcester, and on line of road	603,961.15
Bonds of Lancaster Railroad	26,420.55
Bonds of Boston, Barre & Gardner Railroad	90,600.00
Vermont & Massachusetts R. R. and improvements	1,482,677.94

* Salaries and wages.

Total permanent investments		$38,484,741.83
Cash	$370,200.72	
Bills receivable	109,265.00	
Due from agents and companies	859,660.05	
Materials and supplies	712,465.72	
Debit balances	546,876.00	
Total cash assets		2,598,467.49
Total assets (as per books of the company)		$41,083,209.32

LIABILITIES.

Capital stock		$20,775,100.00
Funded debt		18,534,600.00
Unfunded debt, viz.:		1,487,296.13
Interest unpaid	$12,785.00	
Accrued interest not due	229,927.33	
Dividends unpaid	6,202.40	
Accrued taxes not due	105,030.59	
Notes payable	300,000.00	
Accrued rentals not due	64,645.00	
Vouchers and accounts	768,705.81	
Profit and loss balance		286,213.19
Total liabilities (as per books of the company)		$41,083,209.32

MILEAGE, TRAFFIC, ETC.

Passenger-train mileage	1,440,122
Freight-train mileage	1,706,418
Total revenue train mileage	3,146,540
Switching-train mileage	883,708
Other train mileage	68,483
Total train mileage	4,098,731
Number of season-ticket passengers *	236,330
Number of local passengers (including season)	3,942,449
Number of through passengers (to and from other roads going over and beyond this road)	238,157
Total number of passengers carried	4,180,606
Local passenger mileage (local passengers carried one mile)	47,294,532
Through passenger mileage (through passengers carried one mile)	12,209,959
Total passenger mileage	59,504,491
Number tons local freight	685,869

* Reckoning twelve passengers per week for time of each season ticket.

Number tons through freight (to and from other roads going over and beyond this road) . .	1,866,367
Total number tons freight carried . . .	2,552,236
Local freight mileage (tons local freight carried one mile)	28,721,994
Through freight mileage (tons through freight carried one mile) *	228,435,560
Total freight mileage	257,157,554
Average number of persons employed . . .	4,581

DESCRIPTION.

Main line of road from Boston to Fitchburg and from Greenfield to Troy and Rotterdam . .	189.96 miles.
Main line of road in New York	89.47 "
" " Vermont	6.49 "
" " Massachusetts	94.00 "
Double track on main line	100.56 "
Branches owned by the company, viz.:	
Ice track, Boston (double track)	.68 "
Watertown (single track)	8.26 "
Marlborough (single track)	12.42 "
Peterborough & Shirley (single track) . .	23.62 "
Worcester (single track)	36.00 "
Ashburnham (single track)	2.59 "
Saratoga & Schuylerville (single track) . .	25.52 "
Total length of branches owned by company . .	109.09 "
Total length of branches owned by company in New Hampshire	9.47 "
Total length of branches owned by company in Massachusetts	74.10 "
Total length of branches owned by road in New York	25.52 "
Double track on branches	.68 "
Total road belonging to this company . . .	299.05 "
Sidings and other tracks not above enumerated .	185.48 "
Total length of track, computed as single track .	585.77 "
Total length of steel rails in tracks, not including steel-top rails	472.00 "
[Weights per yard, 60, 72, 76 lbs.]	

Roads and Branches belonging to other Companies, operated by this Company under lease or contract.	
Vermont & Massachusetts R. R., length . . .	56.00 miles.
Turner's Falls Branch of V. & M. R. R., length .	2.80 "
Troy & Bennington R. R , length	5.04 "
Southern Vermont R. R., length	6.19 "

* Carried to and from other roads.

Total length of above roads	70.03	miles.
" " " in Vermont . . .	6.19	"
" " " in Massachusetts . .	58.80	"
" " " in New York . .	5.04	"
Total miles of road operated by this company .	369.08	"
Total miles of road operated by this company in New Hampshire	9.47	"
Number of stations in New Hampshire on all roads operated by this company	3	
Number of telegraph offices in same . . .	1	
Number of stations on all roads owned by this company	124	
Same in New Hampshire	3	

EQUIPMENT.

	Leased.	Owned.	Total.
Number of locomotives	8	171	179
Number of passenger cars	14	172	186
Number of baggage, mail, and express cars	3	43	46
Number of freight cars (basis of 8 wheels)	367	5,277½	5,644½
Number of other cars	.....	316	316

LIST OF ACCIDENTS.

	From causes beyond their own control (in New Hampshire).		From their own misconduct or carelessness (in New Hampshire).		Total in New Hampshire.		Total on whole road operated.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
Passengers	.....	.....	.....	.....	.....	.....	1	7
Employés	.....	.....	.....	.....	.....	.....	16	89
Others	.....	.....	.....	.....	.....	.....	29	22

GENERAL INFORMATION.	
Maximum weight of locomotives in working order.	$58\frac{3}{1}$ tons.
Average " " " "	39 "
Maximum weight of tenders full of fuel and water.	35 "
Average " " " "	26¼ "
Maximum weight of passenger cars . . .	23 "
Average " " " . . .	20 "
" " mail and baggage cars . .	18 "
" " 8-wheel box freight cars . .	10 "
" " 4-wheel " " . .	4½ "
" " 8-wheel platform cars . .	7½ "
" " 4-wheel " " . .	3 "
Length of heaviest engine and tender, from center of forward truck-wheel of engine to center of rear wheel of tender	46 ft. 9 in.
Total length of heaviest engine and tender over all.	57 " 9 "
Number of locomotives equipped with train brake. [Kind of brake, Westinghouse.]	129
Number of cars equipped with train brake . . [Kind of brake, Westinghouse.]	742
Number of passenger cars with Miller platform and buffer	232
Number of miles of road operated by this company not furnished with telegraph facilities: . . From Ashburnham Junction to Ashburnham, 2.59	2.59 miles.

BRIDGES.	
Number of spans of iron bridges of 25 feet and upwards *	6
Aggregate length of same for single track, 695 ft.	
Number of crossings of highways at grade * . .	8
" " " under railroad .	2

RATES OF FARE, ETC.	
Average rate of fare per mile (not including season tickets) for local passengers on roads operated by this company †	1.98 cents.
Average rate of fare per mile received from passengers to and from other roads	2.17 "
Average rate of fare per mile for season-ticket passengers ‡	.69 "
Average rate of fare per mile received from all passengers	1.94 "
Average rate of local freight per ton per mile † .	2.7569 "
Average rate of freight per ton per mile received from freight to and from other roads . . .	.8222 "
Average rate of freight per ton per mile received from all freight	1.0382 "

* In New Hampshire, on miles of road owned. † Rates as per tariff.
‡ Reckoning twelve passengers per week for time of each season ticket.

CAPITAL STOCK.		
Capital stock authorized by charter:		
For double track, per mile . .	$100,000	
For single track, per mile . .	70,000	
For terminal at Boston . .	3,000,000	
Capital stock authorized by votes of company	20,775,100	
Capital stock issued (number of shares, 207,751); amount paid in		$20,775,100.00
Total amount paid in, as per books of the company		20,775,100.00
Total number of stockholders . .	4,186	
Number of stockholders in New Hampshire	270	
Amount of stock held in New Hampshire	$377,900	

DEBT.		
Funded debt, as follows:		
Plain bonds due April 1, 1894; rate of interest, 7 per cent		$500,000.00
Interest paid on same during nine months	$35,000.00	
Plain bonds due October 1, 1897; rate of interest, 6 per cent		500,000.00
Interest paid on same during nine months	$30,000.00	
Plain bonds due October 1, 1899; rate of interest, 5 per cent		500,000.00
Interest paid on same during nine months	$25,000.00	
Plain bonds due October 1, 1900; rate of interest, 5 per cent		500,000.00
Interest paid on same during nine months	$25,000.00	
Plain bonds due October 1, 1901; rate of interest, 5 per cent		500,000.00
Interest paid on same during nine months	$25,000.00	
Plain bonds due April 1, 1902; rate of interest, 5 per cent		500,000.00
Interest paid on same during nine months	$25,000.00	
Plain bonds due April 1, 1903; rate of interest, 5 per cent		500,000.00
Interest paid on same during nine months	$25,000.00	
Plain bonds due March 1, 1904; rate of interest, 4 per cent		500.000.00
Interest paid on same during nine months	$20,000.00	

Plain bonds due June 1, 1905; rate of interest, 4 per cent		$500,000.00
Interest paid on same during nine months	$20,000.00	
Plain bonds due February 1, 1937; rate of interest, 3 per cent		5,000,000.00
Interest paid on same during nine months	$150,000.00	
Plain bonds due April 1, 1907; rate of interest, 4 per cent		1,500,000.00
Interest paid on same during nine months	$52,733.33	
Plain bonds due September 1, 1897; rate of interest, 4½ per cent		2,250,000.00
Interest paid on same during nine months	$97,200.00	
Plain bonds due May 1, 1908; rate of interest, 5 per cent		2,000,000.00
Interest paid on same during nine months	$100,000.00	
Plain bonds due March 1, 1899; rate of interest, 5 per cent		750,000.00
Interest paid on same during nine months	$12,500.00	
Boston, Barre & Gardner R. R. 1st mortgage bonds, due April 1, 1893; rate of interest, 7 per cent		91,300.00
Interest paid on same during nine months	$6,391.00	
Boston, Barre & Gardner R. R. 1st mortgage bonds, due April 1, 1893; rate of interest, 5 per cent		299,700.00
Interest paid on same during nine months	$14,985.00	
Boston, Barre & Gardner R. R. 2d mortgage bonds, due July 1, 1895; rate of interest, 3 per cent		186,300.00
Interest paid on same during nine months	$5,589.00	
Boston, Barre & Gardner R. R. 3d mortgage bonds, due July 1, 1895; rate of interest, 6 per cent		57,300.00
Interest paid on same during nine months	$3,438.00	
Ashburnham R. R. 1st mortgage bonds, due June 1, 1888; rate of interest, 6 per cent, matured and paid.		
Credited on same during nine months	$30.00	
Hoosac Tunnel Dock & Elevator Co.'s mortgage note, due April 1, 1892; rate of interest, 4 per cent		500,000.00

Interest paid on same during nine months	$20,000.00	
Boston, Hoosac Tunnel & Western R. R. debenture bonds, due September 1, 1903; rate of interest, 5 per cent		$1,400,000.00
Interest paid on same during nine months	$70,000.00	
Total amount of funded debt		$18,534,600.00

NAMES AND RESIDENCES OF OFFICERS.

Henry S. Marcy, *President*, Boston, Mass.; John Whitmore, *General Traffic Manager*, Boston, Mass.; C. S. Anthony, *Auditor*, Waltham, Mass.; John Adams, *General Superintendent*, Boston, Mass.; C. L. Hartwell, *General Freight Agent*, Waltham, Mass.; J. R. Watson, *General Passenger Agent*, Boston, Mass.; D. A. Gleason, *Treasurer*, West Medford, Mass.; Thomas Whittemore, *Clerk of Corporation*, Cambridge, Mass.

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

Henry S. Marcy, Robert Codman, David P. Kimball, Boston, Mass.; Rodney Wallace, Charles T. Crocker, Fitchburg, Mass.; W. H. Hollister, Augustus Kountze, W. S. Webb, New York; John Quincy Adams, Quincy, Mass.; James Renfrew, Jr., Adams, Mass.; Frederick L. Ames, Easton, Mass.; George Heywood, Concord, Mass.; Francis Smith, Rockland, Me.

PROPER ADDRESS OF THE COMPANY.

FITCHBURG RAILROAD COMPANY,

BOSTON, MASS.

H. S. MARCY,
C. T. CROCKER,
DAVID P. KIMBALL,
ROBERT CODMAN,
J. Q. ADAMS,
GEORGE HEYWOOD,
Directors.
DANIEL A. GLEASON,
Treasurer.
JOHN ADAMS,
Superintendent.

COMMONWEALTH OF MASSACHUSETTS.

SUFFOLK SS. BOSTON, February 21, 1890. Then personally appeared Messrs. H. S. Marcy, C. T. Crocker, David P. Kimball, Robert Codman, J. Q. Adams, George Heywood, Daniel A. Gleason, and John Adams and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

THOMAS WHITTEMORE,

Justice of the Peace.

REPORT

OF THE

NORTHERN RAILROAD COMPANY *

FOR THE NINE MONTHS ENDING JUNE 30, 1889.

GENERAL EXHIBIT FOR NINE MONTHS.		
Total income		$156,146.32
Total expense (including taxes)		7,108.03
Net income		149,038.29
Dividends declared (3 per cent)		89,919.00
Balance for the year (surplus)		59,119.29
Balance at commencement of year	$178,056.96	
Add amount transferred from Concord & Claremont (N. H.) R. R. for sums paid now refunded	2,549.97	
Balance at commencement of year as so changed		180,606.93
Balance June 30, 1889 (surplus)		239,726.22

ANALYSIS OF EARNINGS.		
Received under contract with Boston & Maine R. R.		$118,815.00
Income from all other sources, viz.:		37,331.32
Balance of interest	$37,264.26	
Miscellaneous	67.06	
Total income from all sources		$156,146.32

BALANCE-SHEET, JUNE 30, 1889.

ASSETS.		
Total permanent investments		$3,068,400.00
Cash	$41,064.21	
Bills receivable	871,044.77	
Concord & Claremont (N. H.) R. R.	254,245.72	
Stock of Northern Railroad	37,708.34	

* Description of road, mileage, traffic, etc, included in report of Boston & Maine R. R.

Mechanicks' Nat'l Bank	$4,300.00		
Superintendent's dep't	12,715.40		
Debit balances	———	$17,015.40	
			$1,221,078.44
Total assets (as per books of the company)			$4,289,478.44

LIABILITIES.

Capital stock		$3,068,400.00
Contingent fund		958,217.96
Unfunded debt, viz.:		23,134.26
Interest unpaid	$33.00	
Dividends unpaid	23,101.26	
Profit and loss balances		239,726.22
Total liabilities (as per books of the company)		$4,289,478.44

Present or Contingent Liabilities not included in the Balance-sheet.

Bonds guaranteed by this company, or a lien on its road, viz.:
Concord & Claremont (N. H.) R. R. 1st M't'ge 7s.

CAPITAL STOCK.

Capital stock authorized by charter	$3,068,400	
Capital stock authorized by votes of company	3,068,400	
Capital stock issued (number of shares, 30,684); amount paid in		$3,068,400.00
Total number of stockholders	1,990	
Number of stockholders in New Hampshire	798	
Amount of stock held in New Hampshire	$787,400	

NAMES AND RESIDENCES OF OFFICERS.

Alvah W. Sulloway, *President;* George E. Todd, *Superintendent;* George A. Kettell, *Treasurer;* William L. Foster, *Clerk of Corporation.*

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

Alvah W. Sulloway, George W. Nesmith, Franklin, N. H.; Josiah H. Benton, Jr., Benjamin P. Cheney, Silas Pierce, Uriel H. Crocker, Boston, Mass.; George E. Todd, Concord, N. H.

PROPER ADDRESS OF THE COMPANY.

NORTHERN RAILROAD,

CONCORD, N. H.

Treasurer's Office, 28 STATE STREET, BOSTON, MASS.

A. W. SULLOWAY, *President.*
GEORGE A. KETTELL,
Treasurer.

COMMONWEALTH OF MASSACHUSETTS.

SUFFOLK SS. February 12, 1890. Then personally appeared the above-named A. W. Sulloway, president, and George A. Kettell, treasurer, and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

WILLIAM H. H. ANDREWS,
Notary Public.

REPORT

OF THE

CONCORD & CLAREMONT (N. H.) RAILROAD COMPANY

FOR THE NINE MONTHS ENDING JUNE 30, 1889.

GENERAL EXHIBIT FOR NINE MONTHS.		
Total income		$26,250.00
Interest accrued during year:		26,250.00
On funded debt	$26,250.00	
Balance at commencement of year	8,012.80	
Deduct sums heretofore paid by Northern R. R. now transferred	2,549.97	
Balance June 30, 1889 (surplus)		5,462.83

ANALYSIS OF EARNINGS.	
Total income from all sources	$26,250.00

ANALYSIS OF EXPENSES.	
Embraced in the Boston & Maine R. R. returns.	

BALANCE-SHEET, JUNE 30, 1889.

ASSETS.		
Total permanent investments		$1,131,206.38
Cash	$61,571.40	
Total cash assets		61,571.40
Total assets (as per books of the company)		$1,192,777.78

LIABILITIES.	
Capital stock	$412,400.00
Funded debt	500,000.00

Unfunded debt, viz.:		$274,914.95
Interest due July 1, 1889	$17,500.00	
Coupons unpaid	175.00	
Northern R. R.	254,245.72	
Superintendent's department	2,994.23	
Profit and loss balance		5,462.83
Total liabilities (as per books of the company)		$1,192,777.78

MILEAGE, TRAFFIC, ETC.

Embraced in Boston & Maine R. R. returns.

CAPITAL STOCK.

Capital stock authorized by votes of company	$412,400	
Capital stock issued (number of shares, 4,124); amount paid in		$412,400.00
Total number of stockholders	11	
Number of stockholders in New Hampshire	11	
Amount of stock held in New Hampshire	$412,400	

DEBT.

Funded debt, as follows:		
Bonds due January 1, 1894; rate of interest, 7 per cent		$500,000.00
Interest paid on same during nine months	$26,250	
Total amount of funded debt		500,000.00

NAMES AND RESIDENCES OF OFFICERS.

Dexter Richards, *President;* George E. Todd, *Superintendent;* George A. Kettell, *Treasurer;* Daniel Barnard, *Clerk of Corporation.*

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

Dexter Richards, Newport, N. H.; D. W. Johnson, Claremont, N. H.; Charles O. Stearns, Josiah H. Benton, Jr., Boston, Mass.; George E. Todd, Concord, N. H.; Alvah W. Sulloway, Franklin, N. H.; Augustus E. Scott, Lexington, Mass.

PROPER ADDRESS OF THE COMPANY.

CONCORD & CLAREMONT (N. H.) RAILROAD,

CONCORD, N. H.

Treasurer's Office, BOSTON, Mass.

A. W. SULLOWAY,
Director.
GEORGE A. KETTELL,
Treasurer.

COMMONWEALTH OF MASSACHUSETTS.

SUFFOLK SS. February 12, 1890. Then personally appeared A. W. Sulloway, president, and George A. Kettell, treasurer, and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

WILLIAM H. H. ANDREWS,
Notary Public.

REPORT

OF THE

PORTLAND & ROCHESTER RAILROAD

FOR THE NINE MONTHS ENDING JUNE 30, 1889.

GENERAL EXHIBIT FOR NINE MONTHS.	
Total income	$148,863.49
Total expense (including taxes)	129,836.25
Net income	19,027.24
Dividends declared (3 per cent)	17,762.11
Balance for nine months	1,265.13
Balance at commencement of year	82,766.26
Balance June 30, 1889	84,031.39

ANALYSIS OF EARNINGS.		
From local passengers (all passengers starting from or stopping at any station on this road)*		$56,717.86
From through passengers (to and from other roads over and beyond this road)		
From express		2,124.86
From mails		5,178.72
Total earnings from passenger department		64,021.44
From local freight (all freight starting from or stopping at any station on this road)*		83,735.24
From through freight (to and from other roads over and beyond this road)		
From other sources, freight department		247.83
Total earnings from freight department		83,983.07
Income from all other sources, viz.:		858.98
Rents	$858.98	
Total income from all sources		$148,863.49

* Including passengers and freight to and from other roads starting from or stopping at stations on this road.

ANALYSIS OF EXPENSES.

Salaries of general officers and clerks	$5,100.00
Legal expenses	303.50
Insurance	677.32
Stationery and printing / Outside agencies and advertising	1,538.46
Contingences and miscellaneous	6,396.81
Repairs of bridges (including culverts and cattle-guards)	2,634.74
Repairs of buildings	3,359.01
Repairs of fences, road-crossings, and signs	1,553.51
Renewal of rails [No. tons steel laid, 91.7.]	3,013.89
Renewal of ties [No. laid, 6,946.]	2,022.72
Repairs of roadbed and track	20,364.99
Repairs of locomotives	11,237.06
Fuel for locomotives	15,653.57
Water supply	708.25
Oil and waste	1,757.34
Locomotive service*	8,118.83
Repairs of passenger cars	5,731.59
New passenger cars	5,372.75
Passenger-train service*	4,609.12
Passenger-train supplies	296.82
Repairs of freight cars	7,455.23
Freight-train service*	6,792.67
Freight-train supplies	104.99
Telegraph expenses	616.41
Loss and damage, freight and baggage	34.34
Personal injuries	1,480.75
Agents' and station service*	5,908.31
Station supplies	780.36
Cross tenders, watchmen, and switchmen	5,492.37
Total operating expenses	$129,115.71
Taxes, local	720.54
Total operating expenses and taxes	$129,836.25

BALANCE-SHEET, JUNE 30, 1889.

ASSETS.

Cost of road and equipment	$592,070.45
Lands in Portland	45,601.44
Lands in Gorham	2,286.00
Lands in Alfred	800.00

* Salaries and wages. † Debit balances.

Lands in Wentworth . . .	$2,450.00	
Total permanent investments		$643,207.89
Cash	$26,152.88	
Bills receivable	250.00	
Due from agents and companies .	708.17	
Materials and supplies . . .	15,282.90	
Total cash assets		42,393.95
Improvement account		8,000.00
Total assets (as per books of the company) .		$693,601.84
LIABILITIES.		
Capital stock		$592,070.45
Unfunded debt, viz. :		17,500.00
Notes payable	$17,500.00	
Profit and loss balance		84,031.39
Total liabilities (as per books of the company)		$693,601.84
MILEAGE, TRAFFIC, ETC.		
Passenger-train mileage		86,048
Freight-train mileage		48,437
Total revenue train mileage		134,485
Switching-train mileage		22,423
Other train mileage		12,460
Total train mileage		169,368
Number of season-ticket passengers * .	33,150	
Number of local passengers (including season) .		173,367
Number of through passengers (to and from other roads going over and beyond this road) . .		13,596
Total number of passengers carried . .		186,963
Local passenger mileage (local passengers carried one mile)		1,548,739
Through passenger mileage (through passengers carried one mile)		373,460
Total passenger mileage		1,922,199
Number tons local freight		48,771
Number tons through freight (to and from other roads going over and beyond this road) . .		50,389
Total number tons freight carried . . .		99,160
Local freight mileage (tons local freight carried one mile)		1,289,426
Through freight mileage (tons through freight carried one mile)†		2,128,435
Total freight mileage		3,417,861
Average number of persons employed . . .		175

* Reckoning twelve passengers per week for time of each season ticket.
† Carried to and from other roads.

DESCRIPTION OF ROAD.	
Main line of road from Portland, Me., to Rochester, N. H.	52.50 miles.
Main line of road in New Hampshire	3.50 "
" " Maine	49.00 "
Sidings and other tracks not above enumerated	13.06 "
Same in New Hampshire	1.50 "
Total length of track, computed as single track	65.56 "
Same in New Hampshire	5.00 "
Total length of steel rail in tracks, not including steel-top rails	52.50 "
[Weights per yard, 56 lbs.]	
Number of stations in New Hampshire on all roads operated by this company	2
Number of telegraph offices in same	2
Number of stations on all roads owned by this company	17
Same in New Hampshire	1

EQUIPMENT.	
Number of locomotives	9
Number of passenger cars	10
Number of baggage, mail, and express cars	7
Number of freight cars (basis of 8 wheels)	240
Number of other cars	25

GENERAL INFORMATION.	
Maximum weight of locomotives in working order	43 tons.
Average " " " "	33 "
Maximum weight of tenders full of fuel and water	18 "
Average " " " "	14 "
Maximum weight of passenger cars	28½ "
Average " " "	25 "
" " of mail and baggage cars	13 "
" " of 8-wheel box freight cars	9 "
" " of 8-wheel platform cars	7½ "
Length of heaviest engine and tender, from center of forward truck-wheel of engine to center of rear wheel of tender	42½ feet.
Total length of heaviest engine and tender over all	50½ "
Number of locomotives equipped with train brake	6
[Kind of brake, Westinghouse automatic.]	
Number of cars equipped with train brake	13
[Kind of brake, Westinghouse automatic.]	
Number of passenger cars with Miller platform and buffer	11

RATES OF FARE, ETC.	
Average rate of fare per mile (not including season tickets) for local passengers on roads operated by this company *	3.058 cents.
Average rate of fare per mile received from passengers to and from other roads	2.930 "
Average rate of fare per mile for season-ticket passengers †	1.058 "
Average rate of fare per mile received from all passengers	2.808 "
Average rate of local freight per ton per mile * .	4.408 "
Average rate of freight per ton per mile received from freight to and from other roads . . .	1.887 "

CAPITAL STOCK.		
Capital stock authorized by charter .	$600,000	
Capital stock paid in on shares not issued (number shares, 5,917).		
Total amount paid in (as per books of the company)		$592,070.45
Total number of stockholders . . .	95	
Number of stockholders in New Hampshire .	3	
Amount of stock held in New Hampshire	$1,100	

NAMES AND RESIDENCES OF OFFICERS.

George P. Wescott, *President*, Portland, Me.; Joseph W. Peters, *Superintendent*, *General Freight Agent*, and *General Passenger Agent*, Portland, Me.; William H. Conant, *Treasurer* and *Clerk of Corporation*, Portland, Me.

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

George P. Wescott, Nathan Webb, William L. Putnam, C. McCarthy, Jr., J. P. Baxter, Portland, Me.; I. S. Ricker, Deering, N. H.; George C. Lord, Newton, Mass.; Arthur Sewall, Bath, Me.; Stephen J. Young, Brunswick, Me.

PROPER ADDRESS OF THE COMPANY.

PORTLAND & ROCHESTER RAILROAD,

PORTLAND, ME.

* Rates as per tariff.

† Reckoning twelve passengers per week for time of each season ticket.

WILLIAM H. CONANT,
Treasurer.
J. W. PETERS,
Superintendent.

STATE OF MAINE.

CUMBERLAND ss. February 11, 1890. Then personally appeared William H. Conant and J. W. Peters above named, and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

F. M. RAY,
Justice of the Peace.

REPORT

OF THE

PETERBOROUGH RAILROAD COMPANY

FOR THE NINE MONTHS ENDING JUNE 30, 1889.

GENERAL EXHIBIT FOR NINE MONTHS.		
Total income		$17,874.76
Total expense (including taxes)		218.70
Net income		17,656.06
Rentals:		17,849.82
Boston & Maine R. R.	$17,849.82	
Interest accrued during nine months:		30.00
On unfunded debt	$30.00	
Dividends declared (6 per cent)		23,100.00
Balance for nine months (deficit)		5,473.94
Balance at commencement of year	$12,471.21	
Deduct floating debt	1,000.00	
Balance at commencement of year as so changed		11,471.21
Balance June 30, 1889		5,997.27

ANALYSIS OF EARNINGS.		
Rents for use of road		$17,849.82
Income from all other sources, viz.:		24.94
Interest on deposits	$24.94	
Total income from all sources		$17,874.76

ANALYSIS OF EXPENSES.	
Salaries of general officers and clerks	$75.00
Contingencies and miscellaneous	143.70

BALANCE-SHEET, JUNE 30, 1889.

ASSETS.

Cost of road	$592,494.00	
Total permanent investments		$592,494.00
Cash	$6,150.27	
Debit balances	45,993.02	
Total cash assets		52,143.29
Total assets (as per books of the company)		$644,637.29

LIABILITIES.

Capital stock		$385,000.00
Unfunded debt, viz.:		153.00
Dividends unpaid	$153.00	
Profit and loss balance		259,484.29
Total liabilities (as per books of the company)		$644,637.29

Present or Contingent Liabilities not included in the Balance-sheet.

Due Boston & Maine R. R. on account	$2,700.00
Total (not included in balance-sheet)	$2,700.00

DESCRIPTION OF ROAD.

Main line of road from Wilton to Greenfield	10.50 miles.
Main line of road in New Hampshire	10.50 "

CAPITAL STOCK.

Capital stock authorized by charter	$600,000	
Capital stock authorized by votes of company	600,000	
Capital stock issued (number of shares, 3,850); amount paid in		$385,000.00
Total amount paid in (as per books of the company)		385,000.00
Total number of stockholders	287	
Number of stockholders in New Hampshire	258	
Amount of stock held in New Hampshire	$258,200	

DEBT.

Total amount of funded debt	$385,000.00

NAMES AND RESIDENCES OF OFFICERS.

Edward Spalding, *President*, Nashua, N. H.; G. C. Shattuck, *Treasurer*, Nashua, N. H.; H. W. Ramsdell, *Clerk of Corporation*, Nashua, N. H.

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

Edward Spalding, George A. Ramsdell, Virgil C. Gilman, Nashua, N. H.; George H. Ball, S. A. B. Abbott, Boston, Mass.; C. E. A. Bartlett, Lowell, Mass.; Thomas B. Eaton, Worcester, Mass.

PROPER ADDRESS OF THE COMPANY.

PETERBOROUGH RAILROAD.

Treasurer's Office, NASHUA, N. H.

EDWARD SPALDING,
President.
G. C. SHATTUCK,
Treasurer.

STATE OF NEW HAMPSHIRE.

HILLSBOROUGH SS. June 27, 1890. Then personally appeared E. Spalding and G. C. Shattuck, and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

G. F. ANDREW,
Justice of the Peace.

REPORT

OF THE

SULLIVAN COUNTY RAILROAD COMPANY

FOR THE NINE MONTHS ENDING JUNE 30, 1889.

GENERAL EXHIBIT FOR NINE MONTHS.		
Total income		$158,877.44
Total expense (including taxes)		117,270.33
Net income		41,607.11
Rentals :		2,700.00
Central Vermont Railroad Company	$2,700.00	
Interest accrued during year:		7,558.78
On unfunded debt	$7,558.78	
Dividends declared (8 per cent)		20,000.00
Balance for nine months (surplus)		11,348.33
Balance at commencement of year		39,508.54
Balance June 30, 1889 (surplus)		50,856.87

ANALYSIS OF EARNINGS.		
From local passengers (all passengers starting from or stopping at any station on this road) *		$13,950.51
From through passengers (to and from other roads over and beyond this road)		34,783.74
From express		2,730.00
From mails		3,699.54
Total earnings from passenger department		55,163.79
From local freight (all freight starting from or stopping at any station on this road) *		6,519.76
From through freight (to and from other roads over and beyond this road)		97,038.64
Total earnings from freight department		103,558.40
Total transportation earnings		158,722.19
Income from all other sources, viz.:		155.25
Rents from real estate	$155.25	
Total income from all sources		$158,877.44

* Including passengers and freight to and from other roads starting from or stopping at stations on this road.

ANALYSIS OF EXPENSES.

Salaries of general officers and clerks	$5,147.93
Legal expenses	444.17
Insurance	312.90
Stationery and printing	694.91
Outside agencies and advertising	166.82
Contingencies and miscellaneous	91.16
Repairs of bridges (including culverts and cattle-guards)	1,870.18
Repairs of buildings	2,401.64
Repairs of fences, road-crossings, and signs	806.22
Renewal of rails	2,875.19
[No. tons steel laid, 140.]	
Renewal of ties	5,646.90
[No. laid, 13,836.]	
Repairs of roadbed and track	13,015.02
Repairs of locomotives	4,973.03
Fuel for locomotives	17,888.24
[Tons of coal, 4,021.]	
Water supply	1,050.77
Oil and waste	784.22
Locomotive service *	10,085.35
Repairs of passenger cars	483.84
Passenger-train service *	1,911.47
Passenger-train supplies	36.95
Mileage passenger cars †	5,161.14
Repairs of freight cars	4,552.99
Freight-train service *	7,617.68
Freight-train supplies	67.03
Mileage freight cars †	12,346.50
Telegraph expenses	417.00
Agents' and station service *	9,353.30
Station supplies	453.50
Total operating expenses	$110,506.05
Taxes, state, for 12 months	6,727.66
Taxes, local	36.62
Total operating expenses and taxes	$117,270.33

PROPERTY ACCOUNTS: CHARGES AND CREDITS DURING THE YEAR.

Grading and masonry	$6.41	
Total for construction		$6.41
Locomotives		2,369.08
Total charges to property accounts		$2,375.49
Net addition to property accounts for the year		2,375.49

* Salaries and wages. † Debit balances.

BALANCE-SHEET, JUNE 30, 1889.

ASSETS.

Cost of road and other real estate	$692,889.30	
Cost of equipment	35,307.10	
Total permanent investments		$728,196.40
Due from agents and companies	$283.56	
Total cash assets		283.56
Profit and loss balance		186.71
Total assets (as per books of the company)		$728,666.67

LIABILITIES.

Capital stock		$500,000.00
Unfunded debt, viz.:		177,809.80
Notes payable	$25,000.00	
Vouchers and accounts	152,809.80	
Profit and loss balance (income account)		50,856.87
Total liabilities (as per books of the company)		$728,666.67

MILEAGE, TRAFFIC, ETC.

Passenger-train mileage	49,028
Freight-train mileage	76,139
Total revenue train mileage	125,167
Switching-train mileage	21,903
Other train mileage	5,102
Total train mileage	152,172
Number of local passengers (including season)	32,209
Number of through passengers (to and from other roads going over and beyond this road)	58,089
Total number of passengers carried	90,298
Local passenger mileage (local passengers carried one mile)	460,813
Through passenger mileage (through passengers carried one mile)	1,278,240
Total passenger mileage	1,739,053
Number tons local freight	7,203
Number tons through freight (to and from other roads going over and beyond this road)	469,464
Total number tons freight carried	476,667
Local freight mileage (tons local freight carried one mile)	127,213

Through freight mileage (tons through freight carried one mile) *	11,950,989
Total freight mileage	12,078,202
Average number of persons employed	109

DESCRIPTION OF ROAD.

Main line of road from Bellows Falls, Vt., to Windsor, Vt.	26.000 miles.
Main line of road in New Hampshire	25.81 "
Main line of road in Vermont	.19 "
Double track on main line	8.681 + "
Same in New Hampshire	8.681 + "
Total road belonging to this company	26.00 "
Sidings and other tracks not above enumerated	5.25 "
Same in New Hampshire	5.25 "
Total length of track computed as single track	39.931 "
Same in New Hampshire	39.741 "
Total length of steel rails in tracks, not including steel-top rails	38.984 + "
[Weights per yard, 56 and 66 lbs.]	
Total miles of road operated by this company	26.00 "
Total miles of road operated by this company in New Hampshire	25.81 "
Number of stations in New Hampshire on all roads operated by this company	6
Number of telegraph offices in same	5
Number of stations on all roads owned by this company	8
Same in New Hampshire	6

EQUIPMENT.

Number of locomotives leased	10

LIST OF ACCIDENTS.

	From causes beyond their own control (in New Hampshire).		From their own misconduct or carelessness (in New Hampshire).		Total in New Hampshire.		Total on whole road operated.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
Passengers	.....	.....	.....	.....	.....	.....	.....	.....
Employés	.....	.....	.....	1	.....	1	.....	1
Others	.....	.....	.....	.....	.....	.....	.....	.....

* Carried to and from other roads.

STATEMENT OF EACH ACCIDENT IN NEW HAMPSHIRE.

October 8, 1888.— William Blake, brakeman on No. 73 way-freight, lost three fingers of one hand coupling cars at North Walpole, N. H.

BRIDGES.	
Number of spans of stone bridges of 25 feet and upwards *	1
Aggregate length of same for single track 26 ft.	
Number of spans of iron bridges of 25 feet and upwards *	4
Aggregate length of same for single track 639 ft.	
Number of spans of timber bridges of 25 feet and upwards *	8
Aggregate length of same for single track, 1,174 ft.	
Number of crossings of highways at grade *	29
" " " over railroad	2
" " " under railroad	3
Number of highway bridges 18 feet above track	2
Number of crossings at which there are neither signals nor flagmen *	29

RATES OF FARE, ETC.	
Average rate of fare per mile (not including season tickets) for local passengers on roads operated by this company †	3.027 cents.
Average rate of fare per mile received from passengers to and from other roads	2.721 "
Average rate of fare per mile received from all passengers	2.800 "
Average rate of local freight per ton per mile †	5.125 "
Average rate of freight per ton per mile received from freight to and from other roads	.811 "
Average rate of freight per ton per mile received from all freight	.857 "

CAPITAL STOCK.		
Capital stock authorized by charter	$500,000	
Capital stock authorized by votes of company	500,000	
Capital stock issued (number of shares, 5,000); amount paid in		$500,000.00
Total number of stockholders	9	

* On miles of road owned in New Hampshire. † Rates as per tariff.

NAMES AND RESIDENCES OF OFFICERS.

A. B. Harris, *President*, Boston, Mass.; W. H. Wilson, *Auditor*, Springfield, Mass.; J. Mulligan, *Superintendent*, Springfield, Mass.; H. E. Howard, *General Freight Agent*, Springfield, Mass.; E. C. Watson, *General Ticket Agent*, Springfield, Mass.; E. F. Lane, *Treasurer*, Keene, N. H.; J. H. Albin, *Clerk of Corporation*, Concord, N. H.

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

A. B. Harris, Boston, Mass.; H. C. Robinson, Hartford, Conn.; Frederick Billings, Woodstock, Vt.; J. H. Williams, Bellows Falls, Vt.; C. J. Amidon, Hinsdale, N. H.; J. H. Albin, Concord, N. H.; N. E. Martin, Concord, N. H.

PROPER ADDRESS OF THE COMPANY.

THE SULLIVAN COUNTY RAILROAD COMPANY,

45 Broadway, New York.

A. B. HARRIS, *President.*
J. H. ALBIN,
NATHANIEL E. MARTIN,
Directors.
E. F. LANE, *Treasurer.*
J. MULLIGAN, *Superintendent.*

State of New Hampshire.

Merrimack ss. July 2, 1890. Then personally appeared the above named John H. Albin and Nathaniel Martin and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

BENJAMIN F. TUCKER,
Justice of the Peace.

COMMONWEALTH OF MASSACHUSETTS.

HAMPDEN SS. SPRINGFIELD, July 1, 1890. Then personally appeared J. Mulligan, superintendent, and made oath to the truth of the foregoing statement by him subscribed, according to his best knowledge and belief.

GEORGE E. FRINK,
Justice of the Peace.

STATE OF NEW HAMPSHIRE.

CHESHIRE SS. July 7, 1890. Then personally appeared the above named E. F. Lane and made oath to the truth of the foregoing statement by him subscribed, according to his best knowledge and belief. Before me,

J. R. BEAL,
Justice of the Peace.

REPORT

OF THE

UPPER COÖS RAILROAD COMPANY

FOR THE SIX MONTHS ENDING JUNE 30, 1889.

GENERAL EXHIBIT FOR SIX MONTHS.	
Total income	$22,929.31
Total expense (including taxes)	15,170.22
Net income	7,759.09
Interest accrued during six months	10,500.00
ANALYSIS OF EARNINGS.	
From local passengers (all passengers starting from or stopping at any station on this road) *	$7,049.72
From express and extra baggage	171.07
From mails	462.80
Total earnings from passenger department	7,683.59
From local freight (all freight starting from or stopping at any station on this road) *	12,740.60
From other sources freight department	2,331.60
Total earnings from freight department	15,072.20
Income from all other sources	173.52
Total income from all sources	$22,929.31
ANALYSIS OF EXPENSES.	
Salaries of general officers and clerks	$1,250.00
Insurance	264.13
Stationery and printing	157.75
Outside agencies and advertising	27.50
Contingencies and miscellaneous	590.36
Repairs of roadbed and track	2,959.60
Repairs of locomotives	2,447.17

* Including passengers and freight to and from other roads starting from or stopping at stations on this road.

Fuel for locomotives	$1,263.60
Oil and waste	247.67
Locomotive service *	1,157.94
Repairs of passenger cars	2,791.93
Passenger-train service *	459.16
Passenger-train supplies	82.55
Repairs of freight cars	319.72
Freight-train service *	263.66
Freight-train supplies	95.71
Telegraph expenses	48.00
Loss and damage, freight and baggage	32.31
Agents' and station service *	511.73
Station supplies	199.73
Total operating expenses	$15,170.22

PROPERTY ACCOUNTS: CHARGES AND CREDITS DURING THE YEAR.

Grading and masonry	$305.80
Bridging	252.25
Land, land damages, and fences	398.96
Passenger and freight stations, wood-sheds and water-stations	265.10
Engine-houses, car-sheds, and turn-tables	290.14
Total for construction	$1,512.25

BALANCE-SHEET, JUNE 30, 1889.

ASSETS.

Cost of road and equipment	$700,000.00	
Total permanent investments		$700,000.00
Cash	$2,470.21	
Bills receivable	9,231.87	
Due from agents and companies	133.44	
Materials and supplies	88,126.36	
Total cash assets		99,961.88
Profit and loss balance		20.00
Total assets (as per books of the company)		$799,981.88

LIABILITIES.

Capital stock		$350,000.00
Funded debt, bonds		350,000.00
Unfunded debt, viz.:		99,981.88
Interest unpaid	$36,750.00	
Vouchers and accounts	63,231.88	
Total liabilities (as per books of the company)		$799,981.88

* Salaries and wages.

MILEAGE, TRAFFIC, ETC.	
Passenger-train mileage	13,104
Freight-train mileage	6,552
Total revenue train mileage	19,656
Total train mileage	19,656
Number of local passengers (including season)	11,114
Total number of passengers carried	11,114
Local passenger mileage (local passengers carried one mile)	146,869
Total passenger mileage	146,869
Number tons local freight	17,887
Total number tons freight carried	17,887
Local freight mileage (tons local freight carried one mile)	236,336
Total freight mileage	236,336
Average number of persons employed	36

DESCRIPTION OF ROAD.	
Main line of road from Coös, N. H., to Beecher Falls, Vt.	22.60 miles.
Main line of road in New Hampshire	20.70 "
" " in Vermont	1.90 "
Total road belonging to this company	22.60 "
Sidings and other tracks not above enumerated	.20 "
Same in New Hampshire	.20 "
Total length of track computed as single track	22.80 "
Same in New Hampshire	20.70 "
Total length of steel rails in tracks, not including steel-top rails	22.80 "
[Weights per yard, 56 lbs.]	
Total miles of road operated by this company	22.90 "
Total miles of road operated by this company in New Hampshire	20.70 "
Number of stations in New Hampshire on all roads operated by this company	3
Number of telegraph offices in same	3
Number of stations on all roads owned by this company	4
Same in New Hampshire	3

EQUIPMENT.	
Number of locomotives	3
Number of passenger cars	4
Number of freight cars	200

GENERAL INFORMATION.	
Maximum weight of locomotives in working order	125 tons.
Average " " " "	$41\frac{2}{3}$ "
" " 8-wheel box freight cars .	20,000 lbs.
" " 8-wheel platform cars . .	18,000 "
Length of heaviest engine and tender, from center of forward truck-wheel of engine to center of rear wheel of tender	50 feet.
Number of locomotives equipped with train brake . [Kind of brake, Westinghouse.]	1
Number of cars equipped with train brake . . [Kind of brake, Westinghouse.]	4
Number of passenger cars with Miller platform and buffer	4

BRIDGES.	
Number of trestle bridges of 25 feet length and upwards *	4
Aggregate length of same for single track 494 ft.	
Number of spans of timber bridges of 25 feet and upwards *	5
Number of crossings of highways at grade * . .	8

RATES OF FARE, ETC.	
Average rate of fare per mile (not including season tickets) for local passengers on roads operated by this company †	4.080 cents.
Average rate of fare per mile received from passengers to and from other roads	4.080 "
Average rate of fare per mile received from all passengers	4.080 "
Average rate of local freight per ton per mile † .	71.220 "
Average rate of freight per ton per mile received from all freight	71.220 "

CAPITAL STOCK.	
Capital stock authorized by charter .	$400,000
Capital stock authorized by votes of company	350,000
Total number of stockholders . . .	7
Number of stockholders in New Hampshire .	4
Amount of stock held in New Hampshire	$233,400

* In New Hampshire, on miles of road owned. † Rates as per tariff.

DEBT.	
Funded debt, as follows:	
Bonds due 1917; rate of interest, 6 per cent .	$350,000.00

NAMES AND RESIDENCES OF OFFICERS.

George Van Dyke, *President*, Lancaster, N. H.; E. G. Sweatt, *General Manager*, Woonsocket, R. I.; A. W. Waldron, *Auditor*, Coos, N. H.; James Twohey, *Superintendent* and *Acting General Freight Agent*, Coos, N. H.; A. W. Waldron, *Acting General Passenger Agent*, Coos, N. H.; James P. Cook, *Treasurer*, Salem, Mass.; C. B. Jordan, *Clerk of Corporation*, Lancaster, N. H.

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

George Van Dyke, I. W. Drew, Lancaster, N. H.; Frank Jones, Charles A. Sinclair, Portsmouth, N. H.; James P. Cook, Salem, Mass.; E. G. Sweatt, Woonsocket, R. I.; Charles Howard, Providence, R. I.

PROPER ADDRESS OF THE COMPANY.

UPPER COÖS RAILROAD,

Coos, N. H.

GEORGE VAN DYKE,
President.
GEORGE VAN DYKE,
JAMES P. COOK,
CHAS. A. SINCLAIR,
CHARLES HOWARD,
Directors.
JAMES P. COOK,
Treasurer.

REPORT

OF THE

MAINE CENTRAL RAILROAD COMPANY

FOR THE NINE MONTHS ENDING JUNE 30, 1889.

GENERAL EXHIBIT FOR NINE MONTHS.		
Total income		$2,647,472.61
Total expense (including taxes)		1,823,574.29
Net income		823,898.32
Rentals:		173,903.22
Belfast & Moosehead Lake R. R.	$27,000.00	
Dexter & Newport R. R.	13,500.00	
European & North American R. R.	94,124.97	
Eastern Maine R. R.	7,125.03	
Portland & Ogdensburg R. R.	32,153.22	
Interest accrued during year:		600,464.58
On funded debt	$596,601.91	
On other debt	3,862.67	
Dividends declared (3 per cent)		107,808.00
Balance for the year (deficit)		58,277.48
Balance at commencement of year	$353,054.11	
Add:		
Premium on bonds sold	12,500.00	
Interest on sinking fund	1,366.38	
Balance at commencement of year as so changed		366,920.49
Balance June 30, 1889 (surplus)		308,643.01

ANALYSIS OF EARNINGS.	
From local passengers (all passengers starting from or stopping at any station on this road) *	$577,609.47
From through passengers (to and from other roads over and beyond this road)	448,841.18
From express and extra baggage	54,253.07
From mails	83,500.83

* Including passengers to and from other roads starting from or stopping at t ations on this road.

Total earnings from passenger department	$1,164,204.55
From local freight (all freight starting from and stopping at any station on this road) *	748,168.17
From through freight (to and from other roads over and beyond this road)	733,116.56
Total earnings from freight department	1,481,284.73
Total transportation earnings	2,645,489.28
Rents for use of roads	1,983.33
Total income from all sources	$2,647,472.61

ANALYSIS OF EXPENSES.

Salaries of general officers and clerks	$49,715.75
Legal expenses	4,331.23
Insurance	6,275.00
Stationery and printing	7,454.94
Outside agencies and advertising	6,575.41
Contingencies and miscellaneous	80,157.61
Repairs of bridges (including culverts and cattle-guards)	31,435.26
New bridges	39,395.83
Repairs of buildings	85,517.88
Repairs of fences, road-crossings, and signs	22,071.31
Renewal of rails	39,775.97
Renewal of ties	43,991.09
Repairs of roadbed and track	273,134.02
Repairs of locomotives	97,727.77
New locomotives	53,684.61
Fuel for locomotives	207,563.99
Water supply	7,616.17
Oil and waste	10,377.15
Locomotive service †	131,084.38
Repairs of passenger cars	57,205.49
New passenger cars	3,027.07
Passenger-train service †	54,904.79
Passenger-train supplies	17,826.29
Mileage passenger cars ‡	11,206.48
Expense of Bar Harbor Ferry	12,835.21
Repairs of freight cars	66,347.07
New freight cars	3,000.00
Freight-train service †	64,399.19
Freight-train supplies	16,084.02
Mileage freight cars ‡	48,289.78
Telegraph expenses	24,137.06
Loss and damage, freight and baggage	4,892.13
Personal injuries	22,532.00

* Including freight to and from other roads starting from or stopping at stations on this road.

† Salaries and wages. ‡ Debit balances.

Agents' and station service *		$122,814.78
Station supplies		41,187.56
Total operating expenses		$1,768,574.29
Taxes, state		45,620.62
Taxes, local		9,379.38
Total operating expenses and taxes		$1,823,574.29

BALANCE-SHEET, JUNE 30, 1889.

ASSETS.

Cost of road	$10,665,048.43	
Cost of equipment	1,926,557.36	
Stock of P., Mt. D. & M. Steamboat Co.	121,000.00	
Dexter & Newport R. R.	5,000.00	
Portland & Rochester R. R.	4,700.00	
Portland & Ogdensburg R. R.	79,272.60	
Sabasticook & Moosehead R. R.	8,000.00	
Portland Union R. R. Station Co.	25,000.00	
Dexter & Piscataquis R. R.	1,125.00	
Bonds of Portland Union R. R. Station Co.	86,000.00	
Androscoggin R. R. lease	768,333.33	
European & North American R. R.	1,000,000.00	
Portland & Ogdensburg R. R.	1,000,000.00	
Maine Shore Line	1,174,992.99	
Total permanent investments		$16,758,765.89
Cash	$525,978.87	
Due from agents and companies	122,669.34	
Materials and supplies	292,487.35	
Sinking fund	116,177.84	
Debit balances	20,128.44	
Total cash assets		1,077,441.84
Total assets (as per books of the company)		$17,836,207.73

LIABILITIES.

Capital stock		$3,603,500.00
Funded debt		13,092,292.00
Unfunded debt, viz.:		819,412.09
Interest unpaid	$129,255.54	
Dividends unpaid	4,407.50	
Notes payable	72,035.00	
Vouchers and accounts	615,714.05	

* Salaries and wages.

Profit and loss balance	$321,003.64
Total liabilities (as per books of the company)	$17,836,207.73

MILEAGE, TRAFFIC, ETC.

Number of local passengers (including season)	891,832
Number of foreign passengers (to and from other roads)	200,887
Total number of passengers carried	1,092,719
Number tons local freight	625,899
Number tons foreign freight (to and from other roads)	344,434
Total number tons freight carried	970,323

DESCRIPTION OF ROAD.

Main line of road from Portland to Bar Harbor	186.40 miles.
" " " Cumberland to Skowhegan	91.20 "
" " " Bath to Lewiston and Farmington	76.30 "
Main line of road in Maine	353.90 "
Double track on main line	11.00 "
Total road belonging to this company	353.90 "

Roads and Branches belonging to other Companies, operated by this Company under lease or contract.

European & North American R. R., length	114.30 miles.
Stillwater branch, length	3.01 "
Enfield branch, length	3.03 "
Eastern Maine R. R., length	18.80 "
Dexter & Newport R. R., length	14.23 "
Belfast & Moosehead Lake R. R., length	33.13 "
Portland & Ogdensburg R. R., length	89.03 "
Total length of above roads	275.53 "
" " " " in New Hampshire	38.03 "
" " " " in Maine	237.50 "
Total miles of road operated by this company	629.43 "
Total miles of road operated by this company in New Hampshire	38.03 "
Number of stations in New Hampshire on all roads operated by this company	14
Number of telegraph offices in same	9
Number of stations on all roads owned by this company	75

EQUIPMENT.

	Leased.	Owned.	Total.
Number of locomotives	.....	.....	118
Number of passenger cars	.....	.....	118
Number of parlor or sleeping cars	.....	.....	.....
Number of baggage, mail, and express cars	.....	.....	43
Number of freight cars (basis of 8 wheels)	300	1,987	2,287
Number of other cars	.....	.....	117

STATEMENT OF EACH ACCIDENT IN NEW HAMPSHIRE.

No serious accident in New Hampshire.

GENERAL INFORMATION.

Maximum weight of locomotives in working order	47 tons.
Average " " " "	39 "
Maximum weight of tenders full of fuel and water	34 "
Average " " " "	28 "
Maximum weight of passenger cars . . .	48,550 lbs.
Average " " " . . .	41,200 "
" " mail and baggage cars . .	38,800 "
" " 8-wheel box freight cars .	17,000 "
" " 8-wheel platform cars . .	14,000 "
Length of heaviest engine and tender, from center of forward truck-wheel of engine to center of rear wheel of tender	45 feet.
Total length of heaviest engine and tender over all	55 "
Number of locomotives equipped with train brake . [Kind of brake, Westinghouse air.]	68
Number of cars equipped with train brake . . [Kind of brake, Westinghouse.]	153
Number of passenger cars with Miller platform and buffer	105
Number of miles of road operated by this company not furnished with telegraph facilities: .	6.04
From Orono to Stillwater 3.01	
From Enfield to Mantague 3.03	

BRIDGES.		
Number of trestle bridges of 25 feet length and upwards *		2 iron.
Aggregate length of same for single track	1,002 ft. 6 in.	
Number of spans of iron bridges of 25 feet and upwards *		20
Aggregate length of same for single track	1,920 ft.	
Number of spans of timber bridges of 25 feet and upwards *		3
Aggregate length of same for single track	82 ft. 7 in.	
Number of crossings of highways at grade *		19
" " " over railroad		1
" " " under railroad		1
Number of highway bridges 18 feet above track		1

CAPITAL STOCK.		
Capital stock authorized by charter	$5,000,000	
Capital stock authorized by votes of company	5,000,000	
Capital stock issued (number of shares, 35,936); amount paid in		$3,59,600.00
Total number of stockholders	633	
Number of stockholders in New Hampshire	24	

DEBT.	
Bonded debt, as follows:	
Androscoggin & Kennebec R. R. loan, 6s	$1,100,000.00
Maine Central Extension loan, 6s	496,500.00
Maine Central $1,100,000 loan, 7s	756,800.00
Portland & Kennebec Consolidated loan, 6s.	1,166,700.00
Androscoggin R. R., City of Bath loan, 6s	425,000.00
Leeds & Farmington R. R. loan, 6s	633,000.00
Maine Central R. R. Consolidated loan, class A	975,000.00
" " " " B	1,524,000.00
" " " " C	1,567,600.00
" " " " D	110,000.00
City of Bangor loan, 6s	1,000,000.00
Maine Central Collateral Trust bonds, 5s	687,000.00
Maine Central Debenture bonds, 5s	58,000.00
Maine Central Sinking Fund bonds, 6s	600,000.00
Maine Shore Line R. R. First Mortgage bonds, 6s	42,000.00
Maine Central R. R. Improvement bonds, class A, 4½s	200,000.00

* In New Hampshire, on miles of road owned.

Maine Central R. R. Improvement bonds, class B, 4½s	$250,000.00
Portland & Ogdensburg R. R. 1st Mortgage loan, 6s	800,000.00
Total bonded debt	$12,391,600.00

NAMES AND RESIDENCES OF OFFICERS.

Arthur Sewall, *President*, Bath, Me.; Payson Tucker, *Vice-President* and *General Manager*, Portland, Me.; George W. York, *Auditor*, Portland, Me.; Jonas Hamilton, *Superintendent* P. & O. Division, Portland, Me.; W. S. Eaton, *General Freight Agent*, Portland, Me.; F. E. Boothby, *General Passenger Agent*, Portland, Me.; J. A. Linscott, *Treasurer*, Farmington, Me.; Josiah H. Drummond, *Clerk of Corporation*, Portland, Me.

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

Arthur Sewall, Thomas W. Hyde, Bath, Me.; George C. Lord, Newton, Mass.; Amos Paul, South Newmarket, N. H.; William G. Davis, Josiah H. Drummond, H. N. Jose, Portland, Me.; Frank Jones, Portsmouth, N. H.; Samuel C. Lawrence, Medford, Mass.; John Ware, Waterville, Me.; Nathaniel J. Bradley, Boston, Mass.; Darius Alden, Augusta, Me.; Joseph S. Ricker, Deering, Me.; Francis W. Hill, Exeter, N. H.

ARTHUR SEWALL,
President.
J. A. LINSCOTT,
Treasurer.
PAYSON TUCKER,
Vice-President and General Manager.

STATE OF MAINE.

CUMBERLAND ss. May 23, 1890. Then personally appeared Arthur Sewall, president, Payson Tucker, vice-president and general manager, and J. A. Linscott, treasurer, and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

J. W. DANA,
Justice of the Peace.

REPORT

OF THE

ATLANTIC AND ST. LAWRENCE RAILROAD COMPANY*

FOR THE YEAR ENDING JUNE 30, 1890.

GENERAL EXHIBIT FOR THE YEAR.		
Total income		$299,921.11
Total expense (including taxes)		275,229.05
Net income		24,692.06
Interest accrued during year:		167,269.30
Proportion for New Hampshire of rental paid by lessees as guaranteed interest on stock and bonds,	$480,602.00	
Balance for the year (deficit)		142,577.24

ANALYSIS OF EARNINGS.		
From local passengers (all passengers starting from or stopping at any station on this road) †		$39,928.29
From through passengers (to and from other roads over and beyond this road)		27,774.68
From express and extra baggage		5,424.25
From mails		7,328.93
Total earnings from passenger department		80,456.15
From local freight (all freight starting from or stopping at any station on this road) †		56,887.74
From through freight (to and from other roads over and beyond this road)		161,769.53
Total earnings from freight department		218,657.27
Total transportation earnings		299,113.42
Income from all other sources, viz.:		807.69
Sundry rents for use of company's property	$807.69	
Total income from all sources		$299,921.11

* For that portion of the line (52.06 miles) in New Hampshire.

† Including passengers and freight to and from other roads starting from or stopping at stations on this road.

ANALYSIS OF EXPENSES.

Salaries of general officers and clerks	$4,355.10
Legal expenses	1,285.66
Insurance	2,248.73
Stationery and printing	156.71
Outside agencies and advertising	3,369.65
Contingencies and miscellaneous	957.13
Repairs of bridges (including culverts and cattle-guards)	4,306.90
Repairs of buildings	4,847.67
Repairs of fences, road-crossings, and signs	2,893.30
Renewal of rails [No. tons steel laid, 200.]	2,900.00
Renewal of ties [No. laid, 28,350.]	7,089.75
Repairs of roadbed and track	25,273.35
Repairs of locomotives	21,464.50
Fuel for locomotives	41,996.62
Water supply	1,292.74
Oil and waste	1,962.61
Locomotive service *	31,515.09
Repairs of passenger cars	7,500.07
Passenger-train service *	4,609.18
Passenger-train supplies	992.12
Repairs of freight cars	19,199.66
Freight-train service *	13,827.54
Freight-train supplies	1,984.24
Mileage freight cars †	7,058.57
Telegraph expenses	4,820.93
Loss and damage, freight and baggage	368.98
Loss and damage, property and cattle	60.23
Personal injuries	988.91
Agents' and station service *	39,598.64
Station supplies	7,952.72
Total operating expenses	$266,877.30
Taxes, state	8,123.60
Taxes, local	228.15
Total operating expenses and taxes	$275,229.05

BALANCE-SHEET, JUNE 30, 1890.

ASSETS.

Cost of road	$2,952,781.00	
Total assets (as per books of the company)		$2,952,781.00

* Salaries and wages. † Debit balances.

LIABILITIES.	
Capital stock, $5,484,000 — proportion for New Hampshire	$1,908,658.00
Funded debt, $3,000,000 — proportion for New Hampshire	1,044,123.00
Total liabilities (as per books of the company)	$2,952,781.00

MILEAGE, TRAFFIC, ETC.		
Passenger-train mileage		103,639
Freight-train mileage		228,184
Total revenue train mileage		331,823
Switching-train mileage (67,215 shunting not included as train miles)	67,337	
Other train mileage		9,511
Total train mileage		341,334
Number of season-ticket passengers *	841	
Number of local passengers (including season)		81,217
Number of through passengers (to and from other roads going over and beyond this road)		22,400
Total number of passengers carried		103,617
Local passenger mileage (local passengers carried one mile)		1,077,833
Through passenger mileage (through passengers carried one mile)		1,164,800
Total passenger mileage		2,242,633
Number tons local freight		190,132
Number tons through freight (to and from other roads going over and beyond this road)		550,287
Total number tons freight carried		740,419
Local freight mileage (tons local freight carried one mile)		3,847,811
Through freight mileage (tons through freight carried one mile) †		28,614,924
Total freight mileage		32,462,735
Average number of persons employed		247

DESCRIPTION.	
Main line of road from Island Pond, Vt., to Portland, Me.	149.58 miles.
Main line of road in New Hampshire	52.06 "
" " Vermont	14.92 "
" " Maine	82.60 "
Total road belonging to this company	149.58 "
Sidings and other tracks not above enumerated	33.85 "

* Reckoning twelve passengers per week for time of each season ticket.
† Carried to and from other roads.

Same in New Hampshire	10.24 miles.
Total length of track, computed as single track .	183.43 "
Same in New Hampshire	62.30 "
Total length of steel rails in tracks, not including steel-top rails	149.58 "
Total miles of road operated by this company .	149.58 "
Total miles of road operated by this company in New Hampshire	52.06 "
Number of stations in New Hampshire on all roads operated by this country	12
Number of stations on all roads owned by this company	33
Same in New Hampshire	12

EQUIPMENT.

Equipment furnished by the lessees.

LIST OF ACCIDENTS.

	From causes beyond their own control (in New Hampshire).		From their own misconduct or carelessness (in New Hampshire).		Total in New Hampshire.		Total on whole road operated.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
Passengers.	.....	.....	.....	.....	.....	.....	.....	1
Employés	.....	2	.....	4	.....	6	1	13
Others	.....	.....	1	3	1	3	4	6

STATEMENT OF EACH ACCIDENT IN NEW HAMPSHIRE.

July 22, 1889. — North Stratford, E. Finnegan, brakeman, coupling.

August 17. — Gorham, G. L. Lurvey, brakeman, defective brake.

August 24. — Gorham, G. H. Hargreave, brakeman, coupling.

September 2. — Gorham, L. Hubbard, trespasser, struck while standing too near track, intoxicated.

September 7. — Gorham, W. Armstrong, trespasser, stealing a ride fell between cars.

October 30. — Gorham, John Casey, coupler, coupling.

November 21. — Gorham, T. F. Kelley, brakeman.

November 25. — North Stratford, A. E. Davis, brakeman, fell off train.

December 7. — Berlin Falls, John Lee, boy, jumping on moving train.

December 13. — North Stratford, John Brown, trespasser, walking on track.

GENERAL INFORMATION.

Maximum weight of locomotives in working order	35 tons.
Average " " " "	32½ "
Maximum weight of tenders full of fuel and water	30 "
Average " " " "	27½ "
Maximum weight of passenger cars	35 "
Average " "	27½ "
" " mail and baggage cars	20 "
" " 8-wheel box freight cars	11 "
" " 8-wheel platform cars	7½ "
Length of heaviest engine and tender, from center of forward truck-wheel of engine to center of rear wheel of tender	41 feet 5 in.
Total length of heaviest engine and tender over all	51 feet 4 in.
Number of locomotives equipped with train brake [Kind of brake, Westinghouse automatic.]	All passenger engines.
Number of cars equipped with train brake [Kind of brake, Westinghouse automatic.]	All passenger cars.
Number of passenger cars with Miller platform and buffer	All passenger cars.

BRIDGES.

Number of spans of iron bridges of 25 feet and upwards *	22
Aggregate length of same for single track, 1,777 ft.	
Number of crossings of highways at grade *	25
" " " over railroad	4
" " " under railroad	1
Number of highway bridges less than 18 feet above track	4
Number of crossings at which there are neither signals nor flagmen *	25

RATES OF FARE, ETC.

Average rate of fare per mile (not including season tickets) for local passengers on roads operated by this company †	3.70 cents.

* In New Hampshire, on miles of road owned. † Rates as per tariff.

Average rate of fare per mile received from passengers to and from other roads		2.38 cents.
Average rate of fare per mile for season-ticket passengers *		1.25 "
Average rate of fare per mile received from all passengers		3.02 "
Average rate of local freight per ton per mile † .		1.48 "
Average rate of freight per ton per mile received from freight to and from other roads . . .		.57 "
Average rate of freight per ton per mile received from all freight		.67 "

CAPITAL STOCK.

Capital stock authorized by charter and acts of Legislature . .	$5,484,000	
Capital stock authorized by votes of company	5,484,000	
Total amount paid in (as per books of the company)		$5,484,000.00
Total number of stockholders . . .	1,404	

DEBT.

Funded debt, as follows:		
1st mortgage bonds due 1884; rate of interest, 6 per cent		$1,499,916.00
Interest paid on same during year	$89,994.96	
2d mortgage bonds due 1891; rate of interest, 6 per cent		712,932.00
Interest paid on same during year	$42,775.92	
3d mortgage bonds due 1909; rate of interest, 6 per cent		786,984.00
Interest paid on same during year	$47,219.04	
Balance on exchange of bonds		168.00
Interest paid on same during year .	$10.08	
Total amount of funded debt		$3,000,000.00

NAMES AND RESIDENCES OF OFFICERS.

Sir Joseph Hickson, *President*, Montreal, Que.; Philip Henry Brown, *Vice-President*, Portland, Me.; W. W. Duffett, *Treasurer*, Portland, Me.; F. R. Barrett, *Clerk of Corporation*, Portland, Me.

* Reckoning twelve passengers per week for time of each season ticket.
† Rates as per tariff.

NAMES AND RESIDENCES OF OFFICERS LAST ELECTED.

Sir Joseph Hickson, Sir Alex. T. Galt, Montreal, Que.; Philip Henry Brown, Harrison J. Libby, Franklin R. Barrett, Francis K. Swan, W. W. Duffett, G. P. Wescott, Wm. L. Putnam, Portland, Me.

PROPER ADDRESS OF THE COMPANY.

ATLANTIC & ST. LAWRENCE RAILROAD COMPANY,

PORTLAND, ME.

SIR JOSEPH HICKSON,
PHILIP HENRY BROWN,
SIR ALEX. T. GALT,
HARRISON J. LIBBY,
FRANKLIN R. BARRETT,
FRANCIS K. SWAN,
W. W. DUFFETT,
G. P. WESCOTT,
WM. L. PUTNAM,
Directors.
W. W. DUFFETT,
Treasurer.

STATE OF MAINE.

CUMBERLAND ss. October 7, 1890. Then personally appeared Philip H. Brown, vice-president, and W. W. Duffett, treasurer, and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

GEO. E. B. JACKSON,
Justice of the Peace.

REPORT

OF THE

CONCORD & MONTREAL RAILROAD COMPANY

FOR THE YEAR ENDING JUNE 30, 1890.

GENERAL EXHIBIT FOR THE YEAR.		
Total income		$2,775,601.61
Total expense (including taxes)		2,189,454.68
Net income		586,146.93
Rentals:		66,527.00
Pemigewasset Valley R. R.	$15,102.00	
Concord & Portsmouth R. R.	31,250.00	
Suncook Valley R. R.	18,375.00	
Old Colony R. R.	1,800.00	
Interest accrued during year:		107,637.96
On funded debt	$65,919.00	
On other debt	41,718.96	
Paid Boston, Concord & Montreal R. R., Dec. 31, 1889, as per contract		177,916.67
Dividends declared		234,000.00
Balance for the year		65.30
Dividends and payments:		411,916.67
Nov. 1, 1889, C. R. R. dividend	$75,000.00	
Dec. 31, 1889, treasurer B., C. & M. R. R., on contract	177,916.67	
May 1, 1890, Div. No. 1, Class I., $24,000 less amt. charged B., C. & M. R. R., $12,000	12,000.00	
May 1, 1890, Class IV.	90,000.00	
July 1, 1890, Class I.	12,000.00	
July 1, 1890, Class IV.	45,000.00	
Balance June 30, 1890		65.30

ANALYSIS OF EARNINGS.

From local passengers (all passengers starting from or stopping at any station on this road)*		$814,209.11
From through passengers (to and from other roads over and beyond this road)		242,779.62
From express and extra baggage		40,540.66
From mails		43,597.48
From other sources, passenger department		14,213.39
Total earnings from passenger department		1,155,340.26
From local freight (all freight starting from or stopping at any station on this road)*		1,102,027.36
From through freight (to and from other roads over and beyond this road)		486,322.04
Total earnings from freight department		1,588,349.40
Income from all other sources, viz.:		31,911.95
Rents	$13,071.04	
Miscellaneous	18,840.91	
Total income from all sources		$2,775,601.61

ANALYSIS OF EXPENSES.

Salaries of general officers and clerks	$83,538.77
Legal expenses	20,453.50
Insurance	8,776.56
Stationery and printing	37,345.82
Outside agencies and advertising	6,552.53
Contingencies and miscellaneous	40,533.96
Manchester & Keene R. R. improvements	13,081.75
Repairs of bridges (including culverts and cattle-guards)	60,060.65
Repairs of buildings	76,493.69
Repairs of shops, machinery, and tools	21,918.38
Repairs of fences, road-crossings, and signs	12,934.68
Renewal of rails [No. tons steel laid, 4,183.]	97,143.69
Renewal of ties [No. laid, 255,816.] [Connection ties and switch sills, 269,659 feet board measure.]	101,926.26
Repairs of roadbed and track	210,409.79
Repairs of locomotives	103,296.45
Fuel for locomotives [Tons of coal, 55,231; cords of wood, 13,557.]	260,466.96
Water supply	10,099.10
Oil and waste	29,199.37

* Including passengers and freight to and from other roads starting from or stopping at stations on this road.

Locomotive service *	$175,319.99
Repairs of passenger cars	65,074.03
Passenger-train service *	61,605.50
Passenger-train supplies	8,555.21
Mileage passenger cars †	3,282.85
Repairs of freight cars	120,696.85
Freight-train service *	131,472.62
Freight-train supplies	3,663.57
Mileage freight cars †	56,292.65
Telegraph expenses	13,362.61
Loss and damage, freight and baggage and overcharges	6,757.84
Loss and damage, property and cattle	7,511.93
Personal injuries	24,548.37
Agents' and station service *	185,561.84
Station supplies	37,498.87
Total operating expenses	$2,095,436.64
Taxes, state	89,008.63
Taxes, local	5,009.41
Total operating expenses and taxes	$2,189,454.68

PROPERTY ACCOUNTS: CHARGES AND CREDITS DURING THE YEAR.

Locomotives (14)		$78,670.93
Passenger, mail, and baggage cars (10)		29,520.93
Freight and other cars (136)		41,808.14
Total for equipment:		$150,000.00
Cost	$228,170.79	
Charged in expense account	78,170.79	
Total charges to property accounts (1889, 1890)		150,000.00
Net addition to property accounts for the years 1889, 1890		150,000.00

BALANCE-SHEET, JUNE 30, 1890.

ASSETS.

Cost of road	$7,555,993.89
Cost of equipment (1889, 1890)	150,000.00
Stock of the following, viz.:	1,043,033.58
Lake Shore R. R.	
Whitefield & Jefferson R. R.	
Tilton & Belmont R. R.	
Suncook Valley R. R.	
Suncook Valley Extension R. R.	

* Salaries and wages. † Debit balances.

Fabyan Hotel Co.		
Winnipesaukee Steamboat Co.		
Wells River Bridge Co.		
Laconia Gas-Light Co.		
Mount Washington Ry.		
Manchester & North Weare R. R.		
Franklin & Tilton R. R.		
Ogdensburg & Lake Champlain R. R.		
L. C. & St. Lawrence Junction R. R.		
Pemigewasset Bridge Co.		
Moosilauke Mt. Road.		
Montpelier & Wells River R. R.		
Woodsville Water-Works.		
Bonds of Southeastern Ry. . . .	$40,000.00	
Other permanent investments .	705,800.04	
Total permanent investments		$9,494,827.51
Cash	$87,587.25	
Bills receivable	17,662.43	
Due from agents and companies .	9,771.88	
Materials and supplies	508,588.22	
Unissued bonds	4,230,000.00	
Debit balances	217,771.10	
Total cash assets		4,991,380.88
Total assets (as per books of the company) .		$14,486,208.39

LIABILITIES.

Capital stock		$4,800,000.00
Funded debt		7,947,900.00
Unfunded debt, viz.:		1,331,158.49
Interest unpaid	$39,371.61	
Dividends unpaid	1,374.00	
Net traffic balance due other companies	5,272.93	
Notes payable	1,027,700.00	
Rentals due July 1	12,585.00	
Vouchers and accounts . .	244,854.95	
Profit and loss balance		321,645.90
Income and expenses, taxes and insurance . .		85,504.00
Total liabilities (as per books of the company)		$14,486,208.39

MILEAGE, TRAFFIC, ETC.

Passenger-train mileage	1,052,497
Freight-train mileage	1,027,858
Total revenue train mileage	2,080,355

Switching-train mileage		562,853
Other train mileage		157,533
Total train mileage		2,800,741
Number of season-ticket passengers*	72,152	
Number of local passengers (including season)		1,612,880
Number of through passengers (to and from other roads going over and beyond this road)		256,907
Total number of passengers carried		1,869,787
Local passenger mileage (local passengers carried one mile)		35,038,285
Through passenger mileage (through passengers carried one mile)		12,442,345
Total passenger mileage		47,480,630
Number tons local freight		1,448,053
Number tons through freight (to and from other roads going over and beyond this road)		1,588,675
Total number tons freight carried		3,036,728
Local freight mileage (tons local freight carried one mile)		66,444,656
Through freight mileage (tons through freight carried one mile)†		59,594,781
Total freight mileage		126,039,437
Average number of persons employed		2,081

DESCRIPTION OF ROAD.

Main line of road from Nashua Junction to Groveton Junction and Base Station	201.30 miles.
Main line of road in New Hampshire	201.30 "
Double track on main line	34.53 "
Same in New Hampshire	34.53 "
Branches owned by the company, viz.:	
Hooksett to Suncook (single track)	2.50 "
Manchester to North Weare (single track)	19.00 "
Whitefield to Jefferson (single track)	13.00 "
Lake Village to Alton Bay (single track)	18.00 "
Belmont Junction to Belmont (single track)	4.00 "
Pittsfield to Center Barnstead (single track)	4.45 "
Nashua to North Acton, Mass. (single track)	20.83 "
Total length of branches owned by company	81.78 "
Total length of branches owned by company in New Hampshire	65.52 "
Total length of road owned by company in Massachusetts	16.26 "
Total road belonging to this company	283.08 "
Sidings and other tracks not above enumerated	110.20 "
Same in New Hampshire	107.50 "

* Reckoning twelve passengers per week for time of each season ticket.

† Carried to and from other roads.

Total length of track, computed as single track	427.81 miles.
Same in New Hampshire	408.85 "
Total length of steel rails in tracks, not including steel-top rails	296.40 "
[Weights per yard, 56, 60, 67, 72 lbs.]	

Roads and Branches belonging to other Companies, operated by this Company under lease or contract.	
Concord & Portsmouth R. R., length	47.50 miles.
Suncook Valley R. R., length	17.37 "
Pemigewasset Valley R. R., length	20.40 "
Total length of above roads	85.27 "
Total length of above roads in New Hampshire	85.27 "
Total miles of road operated by this company	368.35 "
Total miles of road operated by this company in New Hampshire	352.09 "
Number of stations in New Hampshire on all roads operated by this company	121
Number of telegraph offices in same	50
Number of stations on all roads owned by this company	99
Same in New Hampshire	92

EQUIPMENT.

Number of locomotives	102
Number of passenger cars	92
Number of parlor or sleeping cars	3
Number of baggage, mail, and express cars	27
Number of freight cars (basis of 8 wheels)	2,091
Number of other cars	61
Logging trucks	152

LIST OF ACCIDENTS.

	From causes beyond their own control (in New Hampshire).		From their own misconduct or carelessness (in New Hampshire).		Total in New Hampshire.		Total on whole road operated.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
Passengers	.....	1	.....	.....	.....	1	.....	1
Employés	1	1	4	16	5	17	5	18
Others	.....	.....	3	1	3	1	3	1

STATEMENT OF EACH ACCIDENT IN NEW HAMPSHIRE.

January 7, 1890. — James Leahey, car oiler, killed; run over in Concord yard.

January 27. — W. S. Shaw, brakeman, injured; caught between buffer and engine and arm crushed in Nashua yard.

January 31. — L. H. Crouch, engineer, killed; train broke apart and engine thrown from track near Kilkenny.

February 11. — A. S. Sprague, yard man, injured; finger crushed while coupling cars in Concord yard.

February 24. — George Thomas, fireman, killed; knocked from engine and neck broken at Woodsville.

February 24. — Edward E. Munn, yard man, injured; forefinger crushed while coupling cars in Manchester yard.

March 7. — Patrick Ivers, employed at coal shed, injured; cut on head by coal bucket at Manchester.

March 24. — Asa Boardman, yard man, injured; finger crushed, coupling cars in Concord yard.

March 25. — David Marquette, yard man, injured; shoulder jammed by lumber projecting over end of car in Concord yard.

March 26. — Frank L. Locke, yard man, injured; little finger crushed, coupling cars in Concord yard.

March 29. — Edward Doyle (or Coyel), brakeman, killed; fell from freight car and run over at Nashua.

April 3. — John McDermont, yard man, injured; finger crushed, coupling cars in Nashua yard.

April 4. — B. F. Rollins, yard man, injured; arm crushed between cars in Concord yard.

April 5. — James Dana, trespasser, killed; run over, third bridge below Warren, N. H.

April 7. — Fred Styles, yard man, injured; big toe crushed, coupling cars in Nashua yard.

April 10. — John Nichols, yard man, injured; finger crushed, coupling cars in Nashua yard.

April 11. — Gustave A. Graupner, trespasser, killed; found between tracks, run over, at Manchester.

April 18. — George O'Neil, yard man, injured; finger crushed, coupling cars in Manchester yard.

April 19. — W. R. Wallace, yard man, injured; finger crushed, coupling cars in Nashua yard.

May 5. — E. F. Emerson, passenger, injured about eye by stone thrown through window, Herbert Lane's Crossing, Concord, N. H.

May 13. — Gustave Goran, trespasser, injured; cut on head by being struck by engine, while drunk, near Hooksett.

May 24. — David P. Whalen, trespasser, killed; fell from top of car and run over at Manchester.

May 29. — George J. Anderson, assistant agent, killed; run over by engine at Whitefield.

June 4. — Robert Barry, yard man, injured; finger crushed, coupling cars in Concord yard.

June 10. — Harry Keniston, yard man, injured; finger crushed, coupling cars in Concord yard.

June 18. — M. E. Aldrich, car inspector, injured; leg broken by lumber falling from car at Nashua.

June 30. — G. K. Crowell, conductor, injured by collision at Nashua.

GENERAL INFORMATION.		
Maximum weight of locomotives in working order	106,875	lbs.
Average " " " "	70,862	"
Maximum weight of tenders full of fuel and water	70,150	"
Average " " " "	45,378	"
Maximum weight of passenger cars . . .	53,670	"
Average " " " . . .	39,642	"
" " of mail and baggage cars . .	36,402	"
" " of 8-wheel box freight cars .	20,765	"
" " of 8-wheel platform cars . .	16,360	"
Length of heaviest engine and tender, from center of forward truck-wheel of engine to center of rear wheel of tender	47 feet	8 in.
Total length of heaviest engine and tender over all	56 feet	6 in.
Number of locomotives equipped with train brake . [Kind of brake, 54 Westinghouse, 11 Eames.]	65	
Number of cars equipped with train brake . . [Kind of brake, Westinghouse.]	122	
Number of passenger cars with Miller platform and buffer	122	
Charges at the rate of one and one half cents per ton per mile for the transportation of freight coming from other roads are included in the earnings as reported for this road.		

BRIDGES.	
Number of trestle bridges of 25 feet length and upwards *	41
Aggregate length of same for single track, 5,045 ft.	
Number of spans of iron bridges of 25 feet and upwards *	3

* In New Hampshire, on miles of road owned.

Aggregate length of same for single track 202 ft.	
" " " double track 115 ft.	
Number of spans of timber bridges of 25 feet and upwards *	136
Aggregate length of same for single track, 8,913 ft.	
" " " double track, 1,327 ft.	
Number of crossings of highways at grade * .	208
" " " over railroad .	29
" " " under railroad .	12
Number of highway bridges 18 feet above track .	9
Number of highway bridges less than 18 feet above track	20
Number of crossings at which gates or flagmen are maintained	17
Number of crossings at which there are neither signals nor flagmen *	191
Number of railroad crossings at grade: * . .	5
Boston & Maine R. R., Lowell System, at Nashua	
Boston & Maine R. R., Worcester, Nashua & Portland Division, at Nashua.	
Maine Central R. R., at Scott's Junction.	
Maine Central R. R., at Fabyan's.	
Maine Central R. R., at Whitefield.	

RATES OF FARE, ETC.

Average rate of fare per mile (not including season tickets) for local passengers on roads operated by this company †	2.400 cents
Average rate of fare per mile received from passengers to and from other roads	1.950 "
Average rate of fare per mile for season-ticket passengers ‡	.660 "
Average rate of fare per mile received from all passengers	2.230 "
Average rate of local freight per ton per mile † .	1.660 "
Average rate of freight per ton per mile received from freight to and from other roads . . .	.816 "
Average rate of freight per ton per mile received from all freight	1.260 "

CAPITAL STOCK.

Capital stock authorized by act of Legislature	$4,800,000
Capital stock authorized by votes of company	4,800,000

* In New Hampshire, on miles of road owned. † Rates as per tariff.
‡ Reckoning twelve passengers per week for time of each season ticket.

Capital stock issued (number of shares, 48,000); amount paid in		$4,800,000.00
Total amount paid in (as per books of the company)		4,800,000.00
Total number of stockholders . .	2,420	
Number of stockholders in New Hampshire	1,311	
Amount of stock held in New Hampshire, $3,143,100		

DEBT.

Funded debt, as follows:		
Old Boston, Concord & Montreal bonds due (no record); rate of interest, 6 per cent . . .		$500.00
Concord & Montreal R. R. bonds due 1920; rate of interest, 4 per cent		1,270,000.00
Boston, Concord & Montreal bonds due 1893; rate of interest, 6 per cent		582,400.00
Boston, Concord & Montreal bonds due 1893; rate of interest, 7 per cent		1,365,000.00
Boston, Concord & Montreal bonds due 1911; rate of interest, 6 per cent		500,000.00
Interest paid on same during year	$65,919.00	
Total amount of funded debt		3,717,900.00

NAMES AND RESIDENCES OF OFFICERS.

Frederick Smyth, *President*, Manchester, N. H.; Horace E. Chamberlin, *General Traffic Manager*, Concord, N. H.; E. F. Mann, *Superintendent Train Service*, Concord, N. H.; W. A. Stowell, *Superintendent Construction*, Concord, N. H.; Samuel Barrett, *General Freight Agent*, Concord, N. H., Frank E. Brown, *General Passenger Agent*, Concord, N. H.; John F. Webster, *Treasurer*, Concord, N. H.; William M. Chase, *Clerk of Corporation*, Concord, N. H.

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

Frederick Smyth, Noah S. Clark, Walter M. Parker, Manchester, N. H.; Benjamin A. Kimball, John H. Pearson, John A. White, Samuel S. Kimball, Concord, N. H., Charles E. Tilton, Alpha J. Pillsbury, Tilton, N. H.; Charles A. Busiel, Laconia, N. H.; Hiram N. Turner, St. Johnsbury, Vt.; Charles E. Morrison, Boston, Mass.; L. C. Pattee, Winchester, Mass.

PROPER ADDRESS OF THE COMPANY.

CONCORD & MONTREAL RAILROAD,

CONCORD, N. H.

FREDERICK SMYTH,
President.
JOHN F. WEBSTER,
Treasurer.

STATE OF NEW HAMPSHIRE.

MERRIMACK ss. January 6, 1891. Then personally appeared John F. Webster, treasurer of said railroad, and made oath to the truth of the foregoing statement by him subscribed, according to his best knowledge and belief.

JOSEPH W. FELLOWS,
Justice of the Peace.

HILLSBOROUGH ss. January 6, 1891. Then personally appeared Frederick Smyth, president of said railroad, and made oath to the truth of the foregoing statement by him subscribed, according to his best knowledge and belief.

JOSEPH W. FELLOWS,
Justice of the Peace.

REPORT

OF THE

PEMIGEWASSET VALLEY RAILROAD COMPANY

FOR THE YEAR ENDING JUNE 30, 1890.

GENERAL EXHIBIT FOR THE YEAR.	
Total income	$30,504.00
Total expense (including taxes)	312.19
Net income	30,191.81
Dividends declared (6 per cent) August 1, 1889, and October 1, 1890, paid by the Boston, Concord & Montreal Railroad to stockholders of Pemigewasset Valley Railroad	30,204.00
Balance for the year (deficit)	12.19
Balance at commencement of year	135.20
Balance June 30, 1890 (surplus)	123.01

ANALYSIS OF EARNINGS. *		
Rents for use of road 12 months, to February 1, 1890		$30,204.00
Income from all other sources, viz.:		300.00
Received for expenses of organization	$300.00	
Total income from all sources		$30,504.00

ANALYSIS OF EXPENSES. *	
Salaries of general officers and clerks	$256.94
Stationery and printing	15.75
Outside agencies and advertising	12.75
Contingencies and miscellaneous	26.75
Total operating expenses and taxes	$312.19

* Included in reports of Concord Railroad and Concord & Montreal Railroad.

BALANCE-SHEET, JUNE 30, 1890.

ASSETS.

Cost of road	$411,157.61	
Cost of equipment	91,842.14	
Total permanent investments		$502,999.75
Cash	$400.25	
Balance of income for organization	123.01	
Total cash assets		523.26
Total assets (as per books of the company)		$503,523.01

LIABILITIES.

Capital stock	$503,400.00
Profit and loss balance	123.01
Total liabilities (as per books of the company)	$503,523.01

Present or Contingent Liabilities not included in the Balance-sheet.

Unsettled claims for construction, to be paid by capital stock authorized by corporation, on which dividends are to be paid under the lease of the Pemigewasset Valley R. R. to the Boston, Concord & Montreal R. R., estimated at	$26,600	
Total (not included in balance-sheet)		26,600.00

DESCRIPTION OF ROAD. *

Main line of road from Plymouth to Franconia, and branch from Campton to Livermore, estimated	75.000 miles.
Main line of road in New Hampshire, estimated	75.000 "
Track laid if road is not completed	20.057 "
Sidings and other tracks not above enumerated (not including sidings built by the Boston, Concord & Montreal R. R., Boston & Lowell R. R., Concord R. R., and Concord & Montreal R. R., since lease of road, of which this road has no account)	.370 "
Total length of track, computed as single track	20.057 "
Number of stations on all roads owned by this company	8
Same in New Hampshire	8

* Included in reports of Concord Railroad and Concord & Montreal Railroad.

EQUIPMENT.

Number of locomotives leased to B., C. & M. R. R. and operated by C. R. R. and C. & M. R. R. .	2
Number of passenger cars	2
Number of freight cars (basis of 8 wheels) . .	125

STATEMENT OF EACH ACCIDENT IN NEW HAMPSHIRE.

See reports of Concord R. R. and Concord & Montreal R. R.

CAPITAL STOCK.

Capital stock authorized by charter	$2,000,000	
Capital stock authorized by votes of company	530,000	
Capital stock issued (number of shares, 5,034); amount paid in		$503,400.00
Total amount paid in, as per books of the company		503,400.00
Total number of stockholders . . .	174	
Number of stockholders in New Hampshire .	127	
Amount of stock held in New Hampshire	$357,600	

NAMES AND RESIDENCES OF OFFICERS.

John J. Bell, *President*, Exeter, N. H.; Edward D. Harlow, *Treasurer*, Boston, Mass.; George H. Adams, *Clerk of Corporation*, Plymouth, N. H.

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

John J. Bell, Exeter, N. H.; David Saunders, George W. Hills, Lawrence, Mass.; Joseph W. Campbell, Woodstock, N. H.; Daniel Barnard, Franklin, N. H.; John C. French, Henry Chandler, James A. Weston, Manchester, N. H.; John J. Cilley, South Deerfield, N. H.

PROPER ADDRESS OF THE COMPANY.

PEMIGEWASSET VALLEY RAILROAD.

President's Office, EXETER, N. H.

Treasurer's Office, BOSTON, MASS.

Clerk's Office, PLYMOUTH, N. H.

The Pemigewasset Valley Railroad is under lease for 100 years to the Boston, Concord & Montreal Railroad, which now forms a part of the Concord & Montreal Railroad, and was operated from July 1, 1889, to September 19, 1889, by the Concord Railroad, and since that time by the Concord & Montreal Railroad.

EDWARD D. HARLOW,
Treasurer.

COMMONWEALTH OF MASSACHUSETTS.

SUFFOLK ss. October 16, 1890. Then personally appeared Edward D. Harlow and made oath to the truth of the foregoing statement by him subscribed, according to his best knowledge and belief.

GEORGE N. CARPENTER,
Justice of the Peace.

REPORT

OF THE

BOSTON & MAINE RAILROAD

FOR THE YEAR ENDING JUNE 30, 1890.

GENERAL EXHIBIT FOR THE YEAR.

Total income		$14,985,510.34
Total expense (including taxes)		10,008,185.01
Net income		4,977,325.33
Rentals:		3,241,548.57
Eastern R. R. (11 months, to June 1)	* $1,185,606.52	
Boston & Lowell R. R.	685,254.91	
Worcester, Nashua & Rochester R. R.	250,000.00	
Connecticut & Passumpsic Rivers R. R.	233,000.00	
Manchester & Lawrence R. R.	102,000.00	
Central Massachusetts R. R.	101,500.00	
Portland, Saco & Portsmouth R.R.	90,300.00	
Nashua & Lowell R. R.	73,000.00	
Lowell & Andover R. R.	52,500.00	
Portsmouth & Dover R. R.	46,140.00	
Portsmouth, Great Falls & Conway R.R. (11 months, to June 1)	41,512.50	
Peterborough R. R.	35,699.64	
Massawippi Valley Ry.	35,000.00	
Dover & Winnipesaukee R. R.	29,000.00	
Eastern R.R. in New Hampshire	22,500.00	
Stony Brook R. R.	20,750.00	
Wilton R. R.	16,950.00	
Newburyport City R. R.	6,000.00	
West Amesbury Branch R. R.	5,700.00	
Kennebunk & Kennebunkport R.R.	2,925.00	
Wolfeborough R. R.	2,240.00	
Northern R. R. contract	199,920.00	
Sundry track rentals	4,050.00	

* Includes Eastern R. R. proportion of surplus earnings for year ending September 30, 1889, paid as rent, amounting to $436,000.

Interest accrued during the year:		$569,160.34
On funded debt	$426,985.21	
On other debt	142,175.13	
Dividends declared (9½ per cent) on old stock	$7,000,000	665,000.00
Balance for the year (surplus)		501,616.42
Balance at commencement of year	$1,521,857.17	
Add:		
Portsmouth, Great Falls & Conway R. R. profit and loss account, said road having been purchased by Boston & Maine R. R.	1,027.47	
	$1,522,884.64	
Deduct:		
Proportion of surplus earnings of the year ending September 30, 1889, credited improvement account	6,260.82	
Balance at commencement of year as so changed .		1,516,623.82
Balance June 30, 1890 (surplus)		2,018,240.24

ANALYSIS OF EARNINGS.

From local passengers (all passengers starting from and stopping at any station on this road) . .		$5,993,087.80
From through passengers (to and from other roads)		1,135,360.95
From express and extra baggage		430,544.91
From mails		204,168.45
Total earnings from passenger department .		7,763,162.11
From local freight (all freight starting from and stopping at any station on this road) . . .		3,814,377.40
From through freight (to and from other roads) .		2,966,787.80
From other sources, freight department — Eastern transfer		7,419.86
Total earnings from freight department . .		6,788,585.06
Total transportation earnings		14,551,747.17
Rents for use of road		9,662.67
Income from all other sources, viz.: . . .		424,100.50
Rents, tenements, lands, etc. .	$154,842.01	
Income from investments . .	192,938.23	
Interest received	22,633.88	
Income from coal-hoisting engines	6,264.83	
Miscellaneous income . . .	47,421.55	
Total income from all sources		$14,985,510.34

ANALYSIS OF EXPENSES.

Salaries of general officers and clerks		$203,250.53
Legal expenses		80,683.42
Insurance		38,676.75
Stationery and printing		99,458.53
Outside agencies and advertising		50,780.43
Contingencies and miscellaneous		121,103.88
Repairs of bridges (including culverts and cattle-guards)		308,375.33
Repairs of buildings		390,822.28
Repairs of fences, road-crossings, and signs		67,969.66
Renewal of rails		112,776.80
Number tons steel laid, new	8,888.4178	
Number tons steel laid, old	5,669.8785	
Total number tons laid	14,458.2963	
Number tons iron laid	2,173.8745	
Renewal of ties [No. laid, 601,993.]		181,928.36
Repairs of roadbed and track		936,698.12
Repairs of locomotives, including new locomotives		596,482.79
Fuel for locomotives [Tons of coal, 262,276; cords of wood, 11,096.]*		1,128,783.53
Water supply		81,667.34
Oil and waste		39,982.85
Locomotive service †		764,718.76
Repairs of passenger cars, including new cars		451,792.04
Passenger-train service †		384,248.90
Passenger-train supplies		61,517.64
Mileage passenger cars ‡		21,621.50
Repairs of freight cars, including new cars		476,445.09
Freight-train service †		527,041.74
Freight-train supplies		22,824.00
Mileage freight cars ‡		206,708.10
Telegraph expenses		114,123.41
Loss and damage, freight and baggage; Loss and damage, property and cattle		47,955.04
Personal injuries		208,368.59
Agents' and station service †		1,451,171.00
Station supplies		218,570.10
Total operating expenses		$9,396,546.51
Taxes, state; Taxes, local		611,638.50
Total operating expenses and taxes		$10,008,185.01

*This does not include fuel for engines of construction and repair trains, as expense is charged to work done.

† Salaries and wages. ‡ Debit balances.

PROPERTY ACCOUNTS: CHARGES AND CREDITS DURING THE YEAR.*			
Grading and masonry	$2,652,100.52	$197,729.66	$2,849,830.18
Bridging . . .	1,743,613.61	540,099.77	2,283,713.38
Superstructure, including rails . .	3,734,186.65	246.504.94	3,980,691.59
Lands, land damages, and fences . .	4,813,487.71	257,210.55	5,070,698.26
Passenger and freight stations, wood-sheds, and water-stations	2,028,939.21	298,373.05	2,327,312.26
Engine-houses, car-sheds, and turn-tables . . .	327,347.95	96,223.36	423,571.31
Machine-shops . .	360,374.52	33,123.34	393,497.86
Engineering, agencies, salaries, and other expenses during construction . .	924,780.09	1,322.10	926,102.19
Total for c'nstruct'n	$16,584,830.26	$1,670,586.77	$18,255,417.03
Locomotives (140) .	$455,600.00	$442,565.06	$898,165.06
Harbor float † (1) .		5,000.00	5,000.00
Passenger, mail, and baggage cars (312)	591,503.49	486,945.05	1,078,448.54
Freight and other cars (3,142) . . .	454,250.00	621,884.03	1,076,134.03
Snow plows (18) .	9,600.00	2,166.31	11,766.31
Total for equipm'nt	$1,510,953.49	$1,558,560.45	$3,069,513.94
Other expenditures charged to property account: .			3,906,466.49
Stock of Maine Central R. R. .		$1,811,500.00	
Stock of Portsmouth, Great Falls & Conway R. R. . . .		551,300.00	
Stock of Wolfeborough R. R. .		343,400.00	
" Portl'd & Rochester R.R.		182,050.00	
" Chelsea Beach R. R. .		38,300.00	
Stock of Portland, Mt. Desert & Machias Steamboat Co. . .		15,000.00	
Stock of Eastern R. R. in New Hampshire		900.00	
Bar Harbor property . . .		45,104.37	
Lands in Manchester, Mass. .		3,650.00	

* The first column represents cost of construction, investments, etc., of Eastern and Portsmouth, Great Falls & Conway Railroads purchased; second column represents transfer from improvement account of Boston & Maine and Eastern Railroads, being amount expended from October 1, 1883, to June 1, 1890; third column represents total.

† Boston & Maine R. R. proportion, or one half, owned jointly with New York & New England Railroad.

Lands in Revere	$23,400.00	
" East Boston . . .	20,625.00	
" Lawrence . . .	30,000.00	
" Malden . . .	2,301.44	
Stock of St. John Bridge & Ry. Extension Co.	684.00	
Stock of York Harbor & Beach R. R.	248,550.00	
Portland Union Ry. Station Co.	25,000.00	
St. Johnsbury & Lake Champlain R. R. bonds	430,800.00	
Stock of St. Johnsbury & Lake Champlain R. R. . . .	3,283.56	
Eastern R. R. bonds . . .	81,000.00	
Stock of Franklin & Tilton R. R.	33,750.00	
Newburyport R. R. bonds . .	12.00	
Land in Waltham . . .	15,856.12	
Reduction in property accounts:		$58,000.00
Portland Union Ry. Station Co. bonds sold	$58,000.00	
Total charges to property accounts . . .		25,231,397.46
Total credits to property accounts . . .		58,000.00
Net addition to property accounts for the year		$25,173,397.46

BALANCE-SHEET, JUNE 30, 1890.

ASSETS.

Cost of road	$27,876,354.66
Cost of equipment	4,377,693.94
Bar Harbor property . . .	45,104.37
Lands in Lawrence	30,000.00
" Revere	23,400.00
" East Boston . . .	20,625.00
" Portland	16,467.50
" Waltham	15,856.12
" Saco	15,000.00
" Dover and Old Orchard .	14,132.21
" Somerville . . .	5,850.00
" Wakefield	13,450.00
" Manchester, Mass. . .	3,650.00
" Malden	2,301.44
Steamer Mount Washington and wharves	69,260.24
Bonds of St. Johnsbury & Lake Champlain R. R. . . .	483,300.00
Bonds of Newburyport R. R. .	302,511.95
" Danvers R. R. . .	125,000.00
" Eastern R. R. . . .	81,000.00

Bonds of Portland Union Ry. Station Co.	$50,000.00	
Stock of Maine Central R.R. Co.	1,811,500.00	
Stock of Portsmouth, Great Falls & Conway R. R.	551,300.00	
Stock of Portland & Rochester R.R.	482,050.00	
" Wolfeborough R. R.	343,400.00	
Stock of Dover & Winnipesaukee R. R.	263,144.48	
Stock of York Harbor and Beach R. R.	248,550.00	
Stock of Portland & Ogdensburg R. R.	146,238.80	
Stock of Orchard Beach R. R.	49,624.89	
" Chelsea Beach R. R.	38,300.00	
" Franklin & Tilton R. R.	33,750.00	
" Danvers R. R.	27,445.00	
Stock of Portland Union Ry. Station Co.	25,000.00	
Stock of Portland, Mt. Desert & Machias Steamboat Co.	15,000.00	
Stock of St. Johnsbury & Lake Champlain R. R.	4,283.56	
Stock of Eastern R. R. in New Hampshire	900.00	
Stock of St. John Bridge & Ry. Extension Co.	684.00	
Total permanent investments		$37,612,128.16
Cash	$514,222.34	
Bills receivable	226,963.73	
Due from agents and companies	2,263,646.39	
Materials and supplies	1,360,459.07	
Trustees of sinking funds	323,256.88	
Debit balances	562,317.01	
Total cash assets		5,250,865.42
Total assets (as per books of the company)		$42,862,993.58

LIABILITIES.

Capital stock, common:		$13,147,900.00
Boston & Maine	$10,180,600.00	
Eastern	2,185,262.96	
Portsm'th, Great Falls & Conway	639,507.12	
Boston & Maine scrip	142,529.92	
Capital stock, preferred:		3,149,843.80
Boston & Maine	$1,036,600.00	
Eastern	2,113,100.00	
Eastern scrip	143.80	

Funded debt		$17,393,920.31
Unfunded debt, viz:		
Interest unpaid	$144,131.37	
Dividends unpaid	31,094.25	
Notes payable	3,599,800.00	
Vouchers and accounts	1,007,332.25	
Total current liabilities		4,782,357.87
Accrued rentals not yet due	$148,461.11	
" interest not yet due	279,005.57	
" taxes not yet due	303,172.76	
Sundry lease accounts	259,289.69	
		989,929.13
Suspense account		1,157,545.35
Profit and loss balance	$2,018,240.24	
Trustees of sinking funds	223,256.88	
		2,241,497.12
Total liabilities (as per books of the company)		$42,862,993.58

MILEAGE, TRAFFIC, ETC.

Passenger-train mileage		5,695,334
Freight-train mileage		3,724,846
Total revenue train mileage		9,420,180
Switching-train mileage		1,756,475
Other train mileage		319,260
Total train mileage		11,495,915
Number of season-ticket passengers *	3,126,950	
Number of local passengers (including season)		28,783,242
Number of through passengers (to and from other roads going over and beyond this road)		830,307
Total number of passengers carried		29,613,549
Local passenger mileage (local passengers carried one mile)		332,816,540
Through passenger mileage (through passengers carried one mile)		61,639,233
Total passenger mileage		394,455,773
Number tons local freight		3,528,059
Number tons through freight (to and from other roads going over and beyond this road)		2,977,850
Total number tons freight carried		6,505,909
Local freight mileage (tons local freight crrried one mile)		153,630,043
Through freight mileage (tons through freight carried one mile) †		243,844,101
Total freight mileage		397,474,144
Average number of persons employed		9,661

* Reckoning twelve passengers per week for time of each season ticket.
† Carried to and from other roads.

DESCRIPTION OF ROAD.		
Main line of road from Boston to Portland, Western Division . . .	115.50	
Main line of road from Boston to New Hampshire state line, Eastern Division	41.45	
Main line of road from Conway Junction to North Conway, Northern Division .	72.86	
		229.81 miles.
Main line of road in New Hampshire . . .		104.69 "
" " in Massachusetts . . .		72.80 "
" " in Maine		46.92 "
Double track on main line		99.66 "
Same in New Hampshire		15.17 "
Branches owned by the company, viz.:		
Medford (single track)		2.00 "
Methuen (single track, 2.75; double track, 1) .		3.75 "
Great Falls (single track)		2.75 "
E. Boston (single track, 1.91; double track, 1.56)		3.47 "
Charlestown (double track)		1.09 "
Saugus (single track)		9.55 "
Swampscott (single track)		3.96 "
Marblehead (single track)		3.52 "
Lawrence (single track, 18.25; double track, 1.64)		19.89 "
South Reading (single track)		8.12 "
Gloucester (single track)		16.94 "
Essex (single track)		6.00 "
Asbury Grove (single track)		1.06 "
Salisbury (single track)		3.79 "
Total length of branches owned by company . .		85.89 "
Total length of branches owned by company in New Hampshire		2.75 "
Total length of branches owned by company in Massachusetts		83.14 "
Double track on branches		5.29 "
Total road belonging to this company . . .		315.70 "
Sidings and other tracks not above enumerated .		193.14 "
Same in New Hampshire		29.86 "
Total length of track, computed as single track .		613.79 "
Same in New Hampshire		152.47 "
Total length of steel rails in tracks, not including steel-top rails		454.94 "
[Weight per yard, 60 to 72 lbs.]		
Roads and Branches belonging to other Companies, operated by this Company under lease or contract.		
Worcester, Nashua & Rochester R. R.,	length	94.48 miles.
Eastern R. R. in New Hampshire,	"	16.08 "
Portland, Saco & Portsmouth R. R.,	"	50.76 "

Wolfeborough R. R.,	length	12.03	miles.
Chelsea Beach R. R.,	"	3.34	"
Newburyport City R. R.,	"	1.97	"
Portsmouth & Dover R. R.,	"	10.88	"
Danvers R. R.,	"	9.26	"
Newburyport R. R.,	"	26.98	"
Lowell & Andover R. R.,	"	8.73	"
West Amesbury Branch R. R.,	"	4.45	"
Dover & Winnipesaukee R. R.	"	29.00	"
Manchester & Lawrence R. R.,	"	22.39	"
Kennebunk & Kennebunkport R. R.,	"	4.50	"
Boston & Lowell R. R. and branches,	"	98.09	"
Nashua & Lowell R. R.,	"	14.50	"
Stony Brook R. R.,	"	13.16	"
Wilton R. R.,	"	15.50	"
Peterborough R. R.,	"	10.50	"
Manchester & Keene R. R., operated for joint account with Concord & Montreal R. R.,	"	29.59	"
Central Masssachusetts R. R.,	"	98.77	"
Connecticut & Passumpsic Rivers R. R.,	"	110.30	"
Massawippi Valley Ry.,	"	36.75	"
Northern and Concord & Claremont R. Rs.,	"	172.32	"
Total length of above roads		894.33	"
" " " in New Hampshire .		380.88	"
" " " in other States . .		513.45	"
Worcester, Nashua & Rochester R. R., in Mass. .		39.46	"
Chelsea Beach R. R., " .		3.34	"
Newburyport City R. R., " .		1.97	"
Newburyport R. R., " .		26.98	"
Danvers R. R., " .		9.26	"
Lowell & Andover R. R., " .		8.73	"
West Amesbury Branch R. R., " .		2.13	"
Boston & Lowell R. R. and branches, " .		98.09	"
Nashua & Lowell R. R., " .		9.25	"
Stony Brook R. R., " .		13.16	"
Central Massachusetts R. R., " .		98.77	"
Portland, Saco & Portsmouth R. R., in Maine .		50.76	"
Kennebunk & Kennebunkport R. R., " .		4.50	"
Connecticut & Passumpsic Rivers R.R., in Vermont		110.30	"
Massawippi Valley Ry., in Canada . . .		36.75	"
Total length of above roads		894.33	"
" " " in New Hampshire .		380.88	"
" " " in other States . .		513.45	"
" " " in Massachusetts . .		311.14	"
" " " in Maine . . .		55.26	"
" " " in Vermont . . .		110.30	"
" " " in Canada . . .		36.75	"
Total miles of road operated by this company .		1,210.03	"
Total miles of road operated by this company in New Hampshire		488.32	"

Number of stations in New Hampshire on all roads operated by this company	159
Number of telegraph offices in same . . .	99
Number of stations on all roads owned by this company	156
Same in New Hampshire	34

EQUIPMENT.

	Owned by leased roads.	Owned.	Total.
Number of locomotives	212	229	441
Number of passenger cars	248	414	662
Number of parlor or sleeping cars	16	12	28
Number of baggage, mail, and express cars	45	84	129
Number of freight cars (basis of 8 wheels)	4,047¾	4,322½	8,370¼
Number of other cars	238	167	405
Snow plows and ice cutters	21	41	62

LIST OF ACCIDENTS.

	From causes beyond their own control (in New Hampshire).		From their own misconduct or carelessness (in New Hampshire).		Total in New Hampshire.		Total on whole road operated.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
Passengers	.....	.....	.....	1	.....	1	8	58
Employés	1	3	8	18	9	21	31	157
Others	1	.....	11	8	12	8	60	59

STATEMENT OF EACH ACCIDENT IN NEW HAMPSHIRE, FOR THE YEAR ENDING JUNE 30, 1890, AS REPORTED TO THE RAILROAD COMMISSIONERS.

July 21, 1889. — Joseph C. Porter, brakeman, fell between the cars and engine and was run over and instantly killed at West Andover.

August 14. — John Moran, trespasser, lying on the track, was run over and instantly killed at Dover.

September 3. — Fred A. Johnson, conductor, while standing on

top of train, was struck by projecting platform awning and knocked off car, receiving fatal injuries, at North Hampton.

September 30. — Daniel A. Darrah, a switchman, was struck by train and fatally injured at Concord.

October 14. — F. H. Chase, freight conductor, was struck by a projecting plank on passing train and somewhat injured at Windham Junction.

October 30. — Clarence Littlefield, brakeman, was thrown from top of car by the shock of the train breaking apart, and was run over and killed at Powwow.

November 2. — An unknown man was found dead on the track; presumably killed by passing train at Exeter.

November 5. — Rosco Foss attempted to cross between two cars at crossing as train started, and had his foot caught and crushed between draw-bars at Rochester.

November 7. — Daniel O. Nash, employé, was struck by train and slightly injured about the head at Hancock Junction.

November 12. — Mitchell Swett, trespasser, a deaf mute, walking on track was struck by train, receiving slight scalp wounds, at Bennington.

November 25. — Mrs. Albert F. Seavey, passenger, jumped from moving train, injuring her head and shoulders, at Great Falls.

December 7. — John Deignan, employé, while riding on engine fell off under the wheels and received fatal injuries at Nashua.

December 13. — Miss Etta Durgin, trespasser, walking on track, was run over and killed at Dover.

December 22. — C. A. Atkinson, brakeman, struck his head against overhead bridge, receiving slight scalp wounds, at Dover.

December 30. — G. E. Tibbitts, milkman, was killed, F. Harvey, a brakeman, had his arm broken, and William O'Neil, employé, his shoulder sprained, while riding on milk car, which by reason of brakes failing to hold came into collision with another car as train was being shifted at Derry.

January 2, 1890. — Charles Cotte, trespasser, while walking on track was struck by engine and instantly killed at Nashua.

January 2. — Amable Cote, trespasser, while walking on track was struck by train and fatally injured at Nashua.

January 8. — Martin Grady, employé, while coupling cars had his finger broken at Nashua.

January 8. — J. E. French, brakeman, had two fingers badly jammed while coupling cars at Dover.

January 11. — Arthur Blaisdell, brakeman, had his thumb badly jammed while pulling a pin at Dover.

January 16. — Frank Boston, trespasser, attempting to cross track in front of train was struck by engine and injured about the head at Rochester.

January 18. — George F. Case, brakeman, while coupling cars had his arm jammed between draw-bars at Nashua.

January 22. — F. A. Lane, brakeman, struck his head against overhead bridge, receiving scalp wounds, at Dover.

January 25. — Edwin F. Seeley, brakeman, while coupling cars had his thumb taken off and two fingers jammed at Nashua.

January 30. — F. A. Barker, brakeman, while uncoupling engine had his hand jammed at Penacook.

February 6. — W. G. Bowen, brakeman, while coupling cars had his hand crushed at Nashua.

February 10. — H. A. Bliss, brakeman, while coaling engine fell and broke his arm at Nashua.

February 11. — Mrs. E. D. George, while driving across track at Newton Junction was struck by train and being thrown on to pilot was carried some distance, but escaped with slight cuts on her head.

February 26. — Mrs. Charles Cram, trespasser, while walking on track was struck by engine and fatally injured at Rollinsford.

March 1. — Byron H. Horne, trespasser, attempting to climb on engine in motion fell under the wheels and had one leg crushed at Rochester.

March 2. — George E. Cook attempted to cross track ahead of train and was struck by engine and killed at Seabrook.

March 5. — D. B. Murphy, brakeman, while coupling cars was caught between them, receiving a broken rib and bad bruises, at Nashua.

March 6. — William Burke, employé, while throwing a switch had his arm broken by the crank flying back at Nashua.

March 14. — William Meville, employé, while coupling cars had his finger crushed at Nashua Junction.

March 17. — I. Bonner, trespasser, in attempting to climb on to train, fell under the wheels and was fatally injured at West Lebanon.

March 27. — Henry E. Merrill, brakeman, while coupling cars had his thumb broken and hand bruised at Rochester.

April 28. — Thomas B. Dickerman, trespasser, while walking on track was struck by train and instantly killed at Concord.

April 30. — Flora Spinney, trespasser, attempting to go under a freight car had her leg crushed at Portsmouth.

May 12. — Fred Gagon, trespasser, while walking on track at Exeter was struck by engine and one rib broken.

May 15. — Elmer E. Huggett, employé, while coupling cars had two fingers crushed at Concord.

May 16. — John McIntyre, brakeman, while shifting had his foot caught and badly jammed between draw-bar and end of car at Exeter.

May 18. — Fred H. Dodge, employé, while riding on car step struck a crossing fence and was knocked off of car, injuring his hand somewhat, at Windham.

May 20. — John R. Murray, employé, fell between cars and was instantly killed at Sandown.

May 26. — The remains of Francis Hanlon were found lying side of track; when last seen was intoxicated, and was probably run over by passing train at Gonic.

June 5. — Cornelius Connors, section foreman, while walking on track was struck by engine and instantly killed at Rollinsford.

June 18. — Bert Willey, brakeman, fell from train and was fatally injured at Wolfeborough Junction.

June 22. — E. A. Hoffman, brakeman, fell from train and was run over and instantly killed at Penacook.

June 27. — George Cochrane and G. M. Ford, while driving near Ford's Crossing, at Dover Point, were struck by the train, Cochrane being fatally injured, and Ford receiving slight wounds on the head and arm.

GENERAL INFORMATION.

Maximum weight of locomotives in working order	58	tons.
Average " " " "	34	"
Maximum weight of tenders full of fuel and water	42½	"
Average " " " "	23	"
Maximum weight of passenger cars . . .	28¾	"
Average " " " . . .	22	"
" " mail and baggage cars . .	19	"
" " 8-wheel box freight cars .	9½	"
" " 4-wheel " " .	4½	"
" " 8-wheel platform cars . .	7½	"
" " 4-wheel " " . .	3¾	"
Length of heaviest engine and tender, from center of forward truck-wheel of engine to center of rear wheel of tender	46 11/12	feet.
Total length of heaviest engine and tender over all	58	"
Number of locomotives equipped with train brake .	242	
[Kind of brake, Westinghouse automatic.]		

Number of cars equipped with train brake . . [Kind of brake, Westinghouse automatic.]	819
Number of passenger cars with Miller platform and buffer	772

BRIDGES.

Number of trestle bridges of 25 feet length and upwards *	12
Aggregate length of same for single track, 3,039 ft.	
Number of spans of stone bridges of 25 feet and upwards *	1
Aggregate length of same for double track 38 ft.	
Number of spans of iron bridges of 25 feet and upwards *	17
Aggregate length of same for single track 802 ft.	
" " " double track 668 ft.	
Number of spans of timber bridges of 25 feet and upwards *	7
Aggregate length of same for single track 393 ft.	
Number of crossings of highways at grade * . .	111
" " " over railroad .	12
" " " under railroad .	8
Number of highway bridges 18 feet above track .	2
Number of highway bridges less than 18 feet above track	10
Number of crossings at which gates or flagmen are maintained	20
Number of crossings at which there are neither signals nor flagmen *	91
Number of railroad crossings at grade: * . . Concord & Montreal R. R. at South Newmarket Junction. Portland & Rochester R. R. at Rochester.	2
Number of railroad crossings over other railroads:* Western Division over Northern Division at Salmon Falls.	1
Number of railroad crossings under other railroads:* Northern Division under Western Division at Salmon Falls.	1

RATES OF FARE, ETC.

Average rate of fare per mile (not including season tickets) for local passengers on roads operated by this company †	2.006 cents.
Average rate of fare per mile received from passengers to and from other roads	1.842 "

In New Hampshire, on miles of road owned. † Rates as per tariff.

Average rate of fare per mile for season-ticket passengers *		.740 cents.
Average rate of fare per mile received from all passengers		1.807 "
Average rate of local freight per ton per mile †		2.483 "
Average rate of freight per ton per mile received from freight to and from other roads		1.217 "
Average rate of freight per ton per mile received from all freight		1.706 "

CAPITAL STOCK.

Capital stock authorized by charter and additional legislation in Massachusetts	$21,297,743.80		
Capital stock authorized by votes of company	16,297,743.80		
Capital stock issued (number of shares, common, 101,806; preferred, 10,366); amount paid in			$11,217,200.00
Capital stock paid in on shares not issued, Boston & Maine scrip, convertible into stock at par			142,529.92
Total amount paid in on Eastern and Portsmouth, Great Falls & Conway stocks, to be exchanged for Boston & Maine stock			4,938,013.88
Total amount paid in (as per books of the company)			16,297,743.80
Total number of stockholders:			5,892
Boston & Maine, common		3,902	
Boston & Maine, preferred		114	
Eastern, common		1,098	
Eastern, preferred		428	
Portsm'th, Gt. Falls & C'nw'y, common		350	
Number of stockholders in New Hampshire:			1,057
Boston & Maine, common		1,002	
Boston & Maine, preferred		7	
Portsmouth, Great Falls & Conway, common		48	
Amount of stock held in New Hampshire:			$2,115,800.00
Boston & Maine, common	$2,027,800		
Boston & Maine, preferred		11,000	
P'tsm'h, Gt. Falls & Conway, common ‡		77,000	

DEBT.

Funded debt, as follows:	
Bonds due January 1, 1893; rate of interest, 7 per cent	$1,500,000.00

* Reckoning twelve passengers per week for time of each season ticket.

† Rates as per tariff.

‡ This stands on books at $83.28 per share, that being its value in Boston & Maine stock, for which it will be exchanged.

Interest paid on same during year	$108,027.50	
Bonds due January 1, 1894; rate of interest, 7 per cent		$2,000,000.00
Interest paid on same during year	$138,285.00	
Improvement bonds due February 2, 1905; rate of interest, 4 per cent		1,000,000.00
Interest paid on same during year	$36,000.00	
Improvement bonds due February 1, 1907; rate of interest, 4 per cent		500,000.00
Interest paid on same during year	$20,000.00	
Improvement bonds due February 1, 1937; rate of interest, 4 per cent		1,909,000.00
Interest paid on same during year	$68,580.00	
Eastern R. R. Co. United States gold certificates of indebtedness due September 1, 1906; rate of interest, 6 per cent *		7,460,500.00
Eastern R. R. Co. pound sterling certificates of indebtedness due September 1,1906 (£359,400); rate of interest, 6 per cent *		1,749,020.10
Eastern R. R. Co. United States gold scrip .		.21
Eastern R. R. Co. debenture bonds due September 1, 1906; rate of interest, 4½ per cent .		81,000.00
Portsmouth, Great Falls & Conway R. R. bonds due June 1, 1897; rate of interest, 4½ per cent†		998,000.00
Interest paid on same during June, 1890, $20,430		
Portsmouth, Great Falls & Conway R. R. bonds due December 1, 1892; rate of interest, 4½ per cent		2,000.00
Essex R. R. bonds due September 15, 1891; rate of interest, 4½ per cent †.		192,600.00
Essex R. R. bonds due September 15, 1876; rate of interest, 4½ per cent		1,800.00
Total amount of funded debt		$17,393,920.31

NAMES AND RESIDENCES OF OFFICERS.

Frank Jones, *President*, Portsmouth, N. H.; James T. Furber, *Vice-President* and *General Manager*, Lawrence, Mass.; William J. Hobbs, *General Auditor*, Malden, Mass.; *Superintendents* — William Merritt, Western Division, Boston, Mass.; Winslow T. Perkins, Eastern Division, Dover, N. H.; John W. Sanborn, Northern Division, Wolfeborough Junction, N. H.; George W. Hurlburt, Worcester, Nashua & Portland Division, Worcester, Mass.; D. W. Sanborn, Southern Division, Somerville, Mass.; H. E. Folsom, Passumpsic Division, Lyndonville, Vt.; George E. Todd, Northern R. R., Concord, N. H.; D. J. Flanders, *General Passenger* and *Ticket Agent*, Malden, Mass.; W. F. Berry, *General Freight Agent*,

* Interest prior to June 30, paid by Eastern R. R. Co.
Interest prior to June 30, paid by Portsmouth, Great Falls & Conway R.R.

Winchester, Mass.; Amos Blanchard, *Treasurer*, Andover, Mass.; Herbert E. Fisher, *Assistant Treasurer*, Somerville, Mass.; Sigourney Butler, *Clerk of Corporation*, Quincy, Mass.

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

Frank Jones, Portsmouth, N. H.; George C. Lord, Newton, Mass.; Amos Paul, South Newmarket, N. H.; William S. Stevens, Dover, N. H.; Joseph S. Ricker, Deering, Me.; Richard Olney William T. Hart, Asa P. Potter, Boston, Mass.; Samuel C. Lawrence, Medford, Mass.; James T. Furber, Lawrence, Mass.; A. W. Sulloway, Franklin, N. H.

PROPER ADDRESS OF THE COMPANY.

BOSTON & MAINE RAILROAD,

BOSTON, MASS.

FRANK JONES, *President.*
FRANK JONES,
AMOS PAUL,
SAMUEL C. LAWRENCE,
JOSEPH S. RICKER,
WILLIAM S. STEVENS,
RICHARD OLNEY,
ASA P. POTTER,
Directors.
AMOS BLANCHARD,
Treasurer.
JAMES T. FURBER,
Vice-President and General Manager.

COMMONWEALTH OF MASSACHUSETTS.

SUFFOLK SS. BOSTON, September 25, 1890. Then personally appeared Frank Jones, Amos Blanchard, and James T. Furber, above named, and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

SIGOURNEY BUTLER,
Justice of the Peace.

REPORT

OF THE

EASTERN RAILROAD IN NEW HAMPSHIRE

FOR THE YEAR ENDING JUNE 30, 1890.

GENERAL EXHIBIT FOR THE YEAR.	
Total income	$22,613.50
Total expense (including taxes)	429.32
Net income	22,184.18
Dividends declared (4½ per cent)	22,162.50
Balance for the year	21.68

ANALYSIS OF EARNINGS.	
Rents for use of road	$22,500.00
Income from all other sources	113.50
Total income from all sources	$22,613.50

BALANCE-SHEET, JUNE 30, 1890.

ASSETS.		
Cost of road	$780,535.36	
Cash	5,559.90	
Total assets (as per books of the company)		$786,095.26

LIABILITIES.	
Capital stock	$492,500.00
Dividends unpaid	3,049.80
Profit and loss balance	290,545.46
Total liabilities (as per books of the company)	$786,095.26

DESCRIPTION OF ROAD.		
Main line of road from New Hampshire state line to Maine state line		16.08 miles.
Main line of road in New Hampshire		16.08 "
Double track on main line		5.94 "
Same in New Hampshire		5.94 "
Sidings and other tracks not above enumerated		10.81 "
Same in New Hampshire		10.81 "
Total length of steel rails in tracks, not including steel-top rails		24.35 "
Number of stations in New Hampshire on all roads operated by this company		6
Number of stations on all roads owned by this company in New Hampshire		6
BRIDGES.		
Number of trestle bridges of 25 feet length and upwards *		1
Aggregate length of same for single track	429 ft.	
Number of spans of iron bridges of 25 feet and upwards *		1
Aggregate length of same for double track	37 ft.	
Number of spans of timber bridges of 25 feet and upwards *		2
Aggregate length of same for single track	95 ft.	
Number of crossings of highways at grade *		16
" " " over railroad		5
" " " under railroad		1
Number of highway bridges less than 18 feet above track		5
Number of crossings at which gates or flagmen are maintained		12
Number of crossings at which electric signals are maintained *		4
Number of crossings at which there are neither signals nor flagmen *		1
Number of railroad crossings at grade: * Concord at Portsmouth.		1
CAPITAL STOCK.		
Capital stock authorized by charter	$500,000	
Capital stock authorized by votes of company	500,000	
Capital stock issued; amount paid in		$492,500.00
Total number of stockholders	383	
Number of stockholders in New Hampshire	204	
Amount of stock held in New Hampshire	$315,700	

* In New Hampshire, on miles of road owned.

NAMES AND RESIDENCES OF OFFICERS.

Moody Currier, *President*, Manchester, N. H.; Edward A. Abbot, *Treasurer*, Concord, N. H.; W. H. Hackett, *Clerk of Corporation*, Portsmouth, N. H.

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

Moody Currier, Manchester, N. H.; Dexter Richards, Newport, N. H.; Edward L. Giddings, Beverly, Mass.; Edward A. Abbot, Samuel C. Eastman, Concord, N. H.; Wm. H. Goodwin, Boston, Mass.; Frank A. Philbrick, Rye, N. H.

PROPER ADDRESS OF THE COMPANY.

THE EASTERN RAILROAD IN NEW HAMPSHIRE,

52 OLIVER STREET, BOSTON, MASS.

WILLIAM H. GOODWIN,
SAMUEL C. EASTMAN,
EDWARD A. ABBOT,
Directors.
EDWARD A. ABBOT,
Treasurer.

COMMONWEALTH OF MASSACHUSETTS.

SUFFOLK ss. December 11, 1890. Then personally appeared William H. Goodwin, Samuel C. Eastman, and Edward A. Abbot, and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

WILLIAM L. WELCH,
Notary Public.

REPORT

OF THE

MANCHESTER & LAWRENCE RAILROAD COMPANY

FOR THE YEAR ENDING JUNE 30, 1890.

GENERAL EXHIBIT FOR THE YEAR.		
Total income		$106,078.80
Total expense (including taxes)		7,107.42
Net income		98,971.38
Dividends declared (10 per cent)		100,000.00
Balance for the year (deficit)		1,028.62
Balance at commencement of year		118,917.92
Balance June 30, 1890		117,889.30
ANALYSIS OF EARNINGS.		
Rents for use of road		$102,000.00
Income from all other sources, viz.:		4,078.80
Interest	$4,078.80	
Total income from all sources		$106,078.80
ANALYSIS OF EXPENSES.		
Salaries of general officers and clerks		$1,637.50
Legal expenses		5,148.66
Stationery and printing and advertising		224.76
Contingencies and miscellaneous		96.50
Total operating expenses		$7,107.42

BALANCE-SHEET, JUNE 30, 1890.

ASSETS.

Cost of road and equipment	$1,000,000.00	
Telegraph	4,770.35	
Hooksett Branch	18,000.00	
Stock of Suncook Valley R. R.	42,040.00	
Stock of Mount Washington R. R.	3,700.00	
Total permanent investments		$1,068,510.35
Cash	$24,153.45	
Concord, Manchester & Lawrence R. R.	32,000.00	
Total cash assets		56,153.45
Total assets (as per books of the company)		$1,124,663.80

LIABILITIES.

Capital stock		$1,000,000.00
Unfunded debt, viz.:		6,774.50
Dividends unpaid	$6,774.50	
Profit and loss balance		117,889.30
Total liabilities (as per books of the company)		$1,124,663.80

CAPITAL STOCK.

Capital stock authorized by charter	$1,000,000	
Capital stock authorized by votes of company	1,000,000	
Capital stock issued (number of shares, 10,000); amount paid in		$1,000,000.00
Total number of stockholders	570	
Number of stockholders in New Hampshire	321	
Amount of stock held in New Hampshire	$609,600	

NAMES AND RESIDENCES OF OFFICERS.

Charles A. Sinclair, *President*, Portsmouth, N. H.; Henry Chandler, *Treasurer*, Manchester, N. H.; Charles B. Gafney, *Clerk of Corporation*, Rochester, N. H.

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

Charles A. Sinclair, Portsmouth, N. H.; George B. Chandler, Herman F. Straw, Manchester, N. H.; Joseph C. Moore, Gilford, N. H.; John W. Sanborn, Wakefield, N. H.; Elisha R. Brown, Dover, N. H.; Wm. P. Fowler, Boston, Mass.

CHARLES A. SINCLAIR,
JOHN W. SANBORN,
G. B. CHANDLER,
E. R. BROWN,
Directors.
HENRY CHANDLER,
Treasurer.

COMMONWEALTH OF MASSACHUSETTS.

SUFFOLK SS. BOSTON, October 25, 1890. Then personally appeared Charles A. Sinclair, John W. Sanborn, G. B. Chandler, and E. R. Brown, a majority of the directors of the Manchester & Lawrence Railroad Company, and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

WILLIAM P. FOWLER,

Justice of the Peace and Commissioner for the State of New Hampshire resident in the Commonwealth of Massachusetts.

REPORT

OF THE

NASHUA & LOWELL RAILROAD COMPANY

FOR THE YEAR ENDING JUNE 30, 1890.

GENERAL EXHIBIT FOR THE YEAR.		
Total income		$91,089.74
Total expense (including taxes)		10,553.57
Net income		80,536.17
Interest accrued during year:		17,031.24
On funded debt	$17,000.00	
On other debt	31.24	
Dividends declared (9 per cent)		72,000.00
Balance for the year (deficit)		8,495.07
Balance at commencement of year		119,065.03
Balance June 30, 1890 (surplus)		110,569.96

ANALYSIS OF EARNINGS.		
Rents for use of road		$73,000.00
Income from all other sources, viz.:		18,089.74
Interest on notes, $300,000	$17,000.00	
Interest on Union Loan & Trust stock	800.00	
Miscellaneous income	289.74	
Total income from all sources		$91,089.74

ANALYSIS OF EXPENSES.	
Salaries of general officers and clerks	$1,585.00
Legal expenses	8,521.57
Contingencies and miscellaneous, adjustment of claims	447.00
Total operating expenses	$10,553.57

BALANCE-SHEET, JUNE 30, 1890.

ASSETS.

Cost of road	$691,167.07	
Cost of equipment	218,242.95	
Total permanent investments		$909,410.02
Cash	$3,009.94	
Bills receivable	300,000.00	
Accrued interest on $300,000 notes	5,000.00	
Sinking fund	11,111.50	
Total cash assets		319,121.44
Total assets (as per books of the company)		$1,228,531.46

LIABILITIES.

Capital stock		$800,000.00
Funded debt		300,000.00
Unfunded debt, viz.:		17,961.50
Accrued interest on funded debt not yet payable	$5,000.00	
Matured interest coupons	2,968.00	
Dividends unpaid, including due July 1	2,193.50	
Notes payable	7,800.00	
Profit and loss balance		110,569.96
Total liabilities (as per books of the company)		$1,228,531.46

DESCRIPTION OF ROAD.

Main line of road from Nashua to Lowell	14.500 miles.
" " in New Hampshire	5.250 "
" " in Massachusetts	9.250 "
Double track on main line	14.500 "
Same in New Hampshire	5.250 "
Total road belonging to this company	14.500 "
Sidings and other tracks not above enumerated	6.084 "
Same in New Hampshire	1.950 "
Total length of track, computed as single track	35.084 "
Same in New Hampshire	12.450 "

CAPITAL STOCK.

Capital stock authorized by charter	$800,000	
Capital stock issued (number of shares, 8,000); amount paid in		$800,000.00
Total number of stockholders	393	
Number of stockholders in New Hampshire	187	
Amount of stock held in New Hampshire	$247,400	

DEBT.		
Funded debt, as follows:		
Gold bonds due August 3, 1893; rate of interest, 6 per cent		$200,000.00
Interest paid on same during year .	$12,000	
Bonds due July 1, 1900; rate of interest, 5 per cent		100,000.00
Interest paid on same during year .	$5,000	

NAMES AND RESIDENCES OF OFFICERS.

Francis A. Brooks, *President*, Boston, Mass.; Jeremiah W. White, *Treasurer*, Nashua, N. H.

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

Francis A. Brooks, Gedney K. Richardson, Boston, Mass.; Jeremiah W. White, William W. Bailey, Nashua, N. H.; C. E. A. Bartlett, Chelmsford, Mass.

PROPER ADDRESS OF THE COMPANY.

NASHUA & LOWELL RAILROAD CORPORATION,

NASHUA, N. H.

J. W. WHITE,
Director.
J. W. WHITE,
Treasurer.

STATE OF NEW HAMPSHIRE.

HILLSBOROUGH ss. August 8, 1890. Then personally appeared J. W. White and made oath to the truth of the foregoing statement by him subscribed, according to his best knowledge and belief

F. A. EATON,
Justice of the Peace.

REPORT

OF THE

PORTSMOUTH & DOVER RAILROAD COMPANY*

FOR THE YEAR ENDING JUNE 30, 1890.

GENERAL EXHIBIT FOR THE YEAR.

Total income	$46,140.00
Net income	46,140.00
Dividends declared (6 per cent)	46,140.00

BALANCE-SHEET, JUNE 30, 1890.

ASSETS.

Cost of road	$768,400.00	
Total permanent investments		$768,400.00
Cash	$3,556.87	
Bills receivable	600.00	
Total cash assets		4,156.87
Total assets (as per books of the company)		$772,556.87

LIABILITIES.

Capital stock		$769,000.00
Unfunded debt, viz.:		288.00
Dividends unpaid	$288.00	
Profit and loss balance		3,268.87
Total liabilities (as per books of the company)		$772,556.87

* The Portsmouth & Dover Railroad is leased to the Eastern Railroad in New Hampshire at 6 per cent on $769,000 per annum.

DESCRIPTION OF ROAD.	
Main line of road from Portsmouth to Dover	10.88 miles.
Main line of road in New Hampshire	10.88 "
Total road belonging to this company	10.88 "
Sidings and other tracks not above enumerated	1.85 "
Same in New Hampshire	1.85 "
Total length of track, computed as single track	12.73 "
Same in New Hampshire	12.73 "
Total length of steel rails in tracks, not including steel-top rails	5.12 "
[Weights per yard, 58 and 60 lbs.]	
Number of stations in New Hampshire on all roads operated by this company	5
Number of stations on all roads owned by this company	5
Same in New Hampshire	5

BRIDGES.	
Number of trestle bridges of 25 feet length and upwards *	1
Aggregate length of same for single track 94 ft.	
Number of spans of iron bridges of 25 feet and upwards *	7
Aggregate length of same for single track 620 ft.	
Number of crossings of highways at grade *	10
" " " over railroad	1
Number of highway bridges less than 18 feet above track	1
Number of crossings at which gates or flagmen are maintained	4

CAPITAL STOCK.	
Capital stock authorized by charter $769,000	
Capital stock authorized by votes of company 769,000	
Capital stock issued (number of shares, 7,690); amount paid in	$769,000.00
Total amount paid in as per books of the company	769,000.00
Total number of stockholders 150	
Number of stockholders in New Hampshire 138	
Amount of stock held in New Hampshire $753,300	

* In New Hampshire, on miles of road owned.

NAMES AND RESIDENCES OF OFFICERS.

Frank Jones, *President*, Portsmouth, N. H.; George L. Treadwell, *Treasurer*, Portsmouth, N. H.; Calvin Page, *Clerk of Corporation*, Portsmouth, N. H.

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

Frank Jones, Daniel Marcy, Joseph A. Walker, Edmond G. Fay, Portsmouth, N. H.; Joseph D. Guppy, Frank A. Christie, Benjamin F. Neally, Dover, N. H.

PROPER ADDRESS OF THE COMPANY.

PORTSMOUTH & DOVER RAILROAD,

PORTSMOUTH, N. H.

FRANK JONES, *President.*
GEORGE L. TREADWELL,
Treasurer.

STATE OF NEW HAMPSHIRE.

ROCKINGHAM ss. August 6, 1890. Then personally appeared Frank Jones, a director and the president, and George L. Treadwell, the clerk of the Portsmouth & Dover Railroad, and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

CALVIN PAGE,
Justice of the Peace.

REPORT

OF THE

PORTSMOUTH, GREAT FALLS & CONWAY RAILROAD COMPANY*

FOR THE YEAR ENDING JUNE 30, 1890.

GENERAL EXHIBIT FOR THE YEAR.		
Total income		$78,006.95
Net income		78,006.95
Interest accrued during year:		22,500.00
On funded debt, 6 months' rental	$22,500.00	
Dividends declared on 5,990 shares:		55,407.50
6 per cent December 6, 1889	$35,940.00	
3¼ per cent May 15, 1890	19,467.50	
Balance of stock held by trustees Eastern R. R. on which no dividend is payable	5,513	
Balance for the year (surplus)		99.45
Balance at commencement of year		928.02
Balance June 30, 1890 (surplus)		1,027.47

ANALYSIS OF EARNINGS.		
Rents for use of road, 6 months' rental		$22,500.00
Income from all other sources, viz.:		55,506.95
Interest on deposit at bank	$99.45	
Dividend on 5,990 shares, December 16, 1889, at 6 per cent	35,940.00	
Dividend on 5,990 shares, May 15, 1890, at 3¼ per cent	19,467.50	
Total income from all sources		$78,006.95

* This company has sold its road, franchises, and property to the Boston & Maine Railroad, under an agreement ratified by the stockholders, dated May 9, 1890; the rental for the first six months of the year ($22,500) being the full amount received from the B. & M. R. R., as the books were closed and accounts transferred May 31, 1890. This rental being paid semi-annually, we received the amount due for the first six months only.

ANALYSIS OF EXPENSES.

The Portsmouth, Great Falls & Conway Railroad having been leased to the Eastern Railroad Company, and by them to the Boston & Maine Railroad, has now been purchased by the Boston & Maine Railroad, under date of May 9, 1890.

BALANCE-SHEET, JUNE 30, 1890.*

ASSETS.

Cost of road	$2,086,250.00	
Cost of equipment	64,050.00	
Total permanent investments		$2,150,300.00
Cash	$859.00	
A. Blanchard, treasurer B. & M. R. R.	3,439.47	
Total cash assets		4,298.47
Total assets (as per books of the company)		$2,154,598.47

LIABILITIES.

Capital stock		$1,150,300.00
Funded debt		1,000,000.00
Unfunded debt, viz.:		3,271.00
Interest unpaid	$2,407.50	
Dividends unpaid	863.50	
Profit and loss balance		1,027.47
Total liabilities (as per books of the company)		$2,154,598.47

DESCRIPTION OF ROAD.

Main line of road from Conway Junction to North Conway	72.86 miles.
Main line of road in New Hampshire	69.94 "
" " in Maine	2.92 "
Total road belonging to this company	72.86 "
Sidings and other tracks not above enumerated	12.77 "
Same in New Hampshire	11.13 "
Total length of track, computed as single track	85.63 "
Same in New Hampshire	81.07 "
Total length of steel rails in tracks, not including steel-top rails	60.05 "
[Weights per yard, 58, 60, and 63 lbs.]	
Number of stations on all roads owned by this company	18
Same in New Hampshire	17

*The amount of cash, $859, as shown on balance-sheet, is retained by the treasurer of this company, to pay outstanding dividends of December 16, 1889, and May 15, 1890.

EQUIPMENT.	
Equipment shown in the report of the Boston & Maine R. R.	

STATEMENT OF EACH ACCIDENT IN NEW HAMPSHIRE.

See report of Boston & Maine R. R.

BRIDGES.	
Number of trestle bridges of 25 feet and upwards *	11
Aggregate length of same for single track, 3,449 ft.	
Number of spans of iron bridges of 25 feet and upwards *	9
Aggregate length of same for single track 680 ft.	
Number of spans of timber bridges of 25 feet and upwards *	10
Aggregate length of same for single track 512 ft.	
Number of crossings of highways at grade *	68
" " " over railroad	3
" " " under railroad	5
Number of highway bridges 18 feet above track	1
Number of highway bridges less than 18 feet above track	2
Number of crossings at which gates or flagmen are maintained	3
Number of railroad crossings at grade: * Portland & Rochester Railroad at Rochester	1
Number of railroad crossings under other railroads: * Boston & Maine Railroad, W. D., at Salmon Falls.	1

CAPITAL STOCK.	
Capital stock authorized by votes of company $1,150,300	
Capital stock issued (number of shares, 11,503); amount paid in	$1,150,300.00
Total amount paid in (as per books of the company)	1,150,300.00
Total number of stockholders 350	
Number of stockholders in New Hampshire 48	
Amount of stock held in New Hampshire $77,000	

* In New Hampshire, on miles of road owned.

DEBT.		
Funded debt, as follows:		
Bonds due June 1, 1937; rate of interest, 4½ per cent		$1,000,000.00
Interest accrued on same during year	$22,500	
Total amount of funded debt		$1,000,000.00

NAMES AND RESIDENCES OF OFFICERS.

Samuel C. Lawrence, *President*, Medford, Mass.; Frank Jones, *Vice-President*, Portsmouth, N. H.; Edward Lesley, *Treasurer*, Newburyport, Mass.; Wallace Hackett, *Clerk of Corporation*, Portsmouth, N. H.

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

Samuel C. Lawrence, Medford, Mass.; Frank Jones, Portsmouth, N. H.; Walter Hunnewell, Wellesley, Mass.; John W. Sanborn, Wakefield, N. H.; Ebenezer G. Wallace, Rochester, N. H.

PROPER ADDRESS OF THE COMPANY.

PORTSMOUTH, GREAT FALLS & CONWAY RAILROAD.

Treasurer's Office, EASTERN RAILROAD,

CAUSEWAY STREET, BOSTON, MASS.

FRANK JONES,
WALTER HUNNEWELL,
JOHN W. SANBORN,
Directors.
EDWARD LESLEY,
Treasurer.

COMMONWEALTH OF MASSACHUSETTS.

SUFFOLK SS. BOSTON, September 13, 1890. Then personally appeared Frank Jones, Walter Hunnewell, and John W. Sanborn, and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

EDWARD LESLEY,
Justice of the Peace.

SUFFOLK SS. BOSTON, September 15, 1890. Then personally appeared Edward Lesley and made oath to the truth of the foregoing statement by him subscribed, according to his best knowledge and belief.

C. E. A. BARTLETT,
Justice of the Peace.

REPORT

OF THE

WEST AMESBURY BRANCH RAILROAD COMPANY

FOR THE YEAR ENDING JUNE 30, 1890.

GENERAL EXHIBIT FOR THE YEAR.		
Total income		$5,700.00
Total expense (including taxes)		486.19
Net income		5,213.81
Interest accrued during the year:		3,990.00
On funded debt	$3,990.00	
Dividends declared (1½ per cent)		855.00
Balance for the year (surplus)		368.81
Balance at commencement of year		263.12
Balance June 30, 1890 (surplus)		631.93

ANALYSIS OF EARNINGS.	
Rents for use of road	$5,700.00
Total income from all sources	5,700.00

ANALYSIS OF EXPENSES.	
Salaries of general officers and clerks	$50.00
Stationery and printing	.75
Contingencies and miscellaneous	2.27
Total operating expenses	$53.02
Taxes, state	433.17
Total operating expenses and taxes	$486.19

BALANCE-SHEET, JUNE 30, 1890.

ASSETS.

Cost of road	$114,000.00	
Total permanent investments		$114,000.00
Cash	$667.43	
Total cash assets		667.43
Total assets (as per books of the company)		$114,667.43

LIABILITIES.

Capital stock		$57,000.00
Funded debt		57,000.00
Unfunded debt, viz.:		35.50
Interest unpaid	$28.00	
Dividends unpaid	7.50	
Profit and loss balance		631.93
Total liabilities (as per books of the company)		$114,667.43

DESCRIPTION OF ROAD.

Main line of road from Merrimac to Newton, N. H.	4.45 miles.
" " in New Hampshire	2.32 "
" " in Massachusetts	2.13 "
Sidings and other tracks not above enumerated	.49 "
Same in New Hampshire	.38 "
Total length of track, computed as single track	4.94 "
Same in New Hampshire	2.70 "

CAPITAL STOCK.

Capital stock authorized by charter	$150,000	
Capital stock authorized by votes of company	114,000	
Capital stock issued (number of shares, 570); amount paid in		$57,000.00
Total amount paid in (as per books of the company)		57,000.00
Total number of stockholders	27	
Number of stockholders in New Hampshire	3	
Amount of stock held in New Hampshire	$15,700	

DEBT.

Funded debt, as follows:		
Bonds due July 1, 1893; rate of interest, 7 per cent		$57,000.00
Interest paid on same during year	$3,990.00	
Total amount of funded debt		$57,000.00

NAMES AND RESIDENCES OF OFFICERS.

William H. Haskell, *President;* Daniel J. Poore, *Treasurer;* Daniel J. Poore, *Clerk of Corporation.*

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

William H. Haskell, Benjamin F. Sargent, Albert Sargent, John B. Judkins, Merrimac, Mass.; E. R. Brown, Dover, N. H.

PROPER ADDRESS OF THE COMPANY.

WEST AMESBURY BRANCH RAILROAD COMPANY,

MERRIMAC, MASS.

WILLIAM H. HASKELL,
B. F. SARGENT,
ALBERT SARGENT,
Directors.
DANIEL J. POORE,
Treasurer.

COMMONWEALTH OF MASSACHUSETTS.

ESSEX ss. MERRIMAC, September 5, 1890. Then personally appeared William H. Haskell, B. F. Sargent, Albert Sargent, and D. J. Poore, and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

O. E. LITTLE,
Notary Public.

REPORT

OF THE

WOLFEBOROUGH RAILROAD COMPANY

FOR THE YEAR ENDING JUNE 30, 1890.

GENERAL EXHIBIT FOR THE YEAR.	
Total income	$2,190.00
Net income	2,190.00
Dividends declared (6 per cent) on 365 shares .	2,190.00
Balance of 3,490 shares held by trustees of Eastern Railroad on which no dividend is payable.	
ANALYSIS OF EARNINGS.	
Rents for use of road	$2,190.00
Total income from all sources	2,190.00
ANALYSIS OF EXPENSES.	
Leased to the Eastern Railroad Company for annual rental of $6 per share (on 365 shares), payable semi-annually, and included in the lease of the Eastern Railroad to the Boston & Maine Railroad on the same terms.	
BALANCE-SHEET, JUNE 30, 1890.	
ASSETS.	
Cost of road $385,500	
Total assets (as per books of the company) .	$385,500.00

LIABILITIES.	
Capital stock	$385,500.00
Total liabilities (as per books of the company)	385,500.00

DESCRIPTION OF ROAD.	
Main line of road from Wolfeborough Junction to Wolfeborough	12.03 miles.
Main line of road in New Hampshire	12.03 "
Total roads belonging to this company	12.03 "
Sidings and other tracks not above enumerated	2.09 "
Same in New Hampshire	2.09 "
Total length of track, computed as single track	14.12 "
Same in New Hampshire	14.12 "
Number of stations on all roads owned by this company	4
Same in New Hampshire	4

STATEMENT OF EACH ACCIDENT IN NEW HAMPSHIRE.

See report of Boston & Maine R. R.

BRIDGES.	
Number of trestle bridges of 25 feet length and upwards *	5
Aggregate length of same for single track 383 ft.	
Number of spans of timber bridges of 25 feet and upwards *	2
Aggregate length of same for single track 62 ft.	
Number of crossings of highways at grade *	11
Number of crossings at which there are neither signals nor flagmen *	11

CAPITAL STOCK.		
Capital stock authorized by votes of company	$385,500	
Capital stock issued (number of shares, 3,855); amount paid in		$385,500.00
Total number of stockholders	80	
Number of stockholders in New Hampshire	63	
Amount of stock held in New Hampshire	$28,200	

* In New Hampshire, on miles of road owned.

NAMES AND RESIDENCES OF OFFICERS.

Samuel C. Lawrence, *President*, Medford, Mass.; Frank Jones, *Vice-President*, Portsmouth, N. H.; Edward Lesley, *Treasurer*, Newburyport, Mass.; John L. Peavey, *Clerk of Corporation*, Wolfeborough, N. H.

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

Samuel C. Lawrence, Medford, Mass.; Frank Jones, Portsmouth, N. H.; Walter Hunnewell, Wellesley, Mass.; John W. Sanborn, Wakefield, N. H.; Joseph L. Avery, Blake Folsom, Wolfeborough, N. H.; Amos Paul, South Newmarket, N. H.

PROPER ADDRESS OF THE COMPANY.

WOLFEBOROUGH RAILROAD.

Treasurer's Office, EASTERN RAILROAD, BOSTON, Mass.

FRANK JONES,
WALTER HUNNEWELL,
JOHN W. SANBORN,
AMOS PAUL,
Directors.
EDWARD LESLEY,
Treasurer.

COMMONWEALTH OF MASSACHUSETTS.

SUFFOLK ss. BOSTON, September 13, 1890. Then personally appeared Frank Jones, Walter Hunnewell, John W. Sanborn, and Amos Paul, and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

EDWARD LESLEY,
Justice of the Peace.

SUFFOLK ss. BOSTON, September 15, 1890. Then personally appeared Edward Lesley, and made oath to the truth of the foregoing statement by him subscribed, according to his best knowledge and belief.

C. E. A. BARTLETT,
Justice of the Peace.

REPORT

OF THE

WORCESTER, NASHUA & ROCHESTER RAILROAD COMPANY*

FOR THE YEAR ENDING JUNE 30, 1890.

GENERAL EXHIBIT FOR THE YEAR.		
Total income		$254,000.00
Total expense (including taxes)		1,777.64
Net income		252,121.44
Interest accrued during year:		85,927.44
On funded debt	$67,182.78	
On other debt	18,744.66	
Dividends declared (6 per cent) on 30,644 shares		183,864.00
Balance for the year (deficit)		17,670.00
Balance at commencement of year	$259,817.28	
Add on account of old claims	2,357.16	
Balance at commencement of year as so changed		262,174.44
Balance June 30, 1890 (deficit)		279,844.44

BALANCE-SHEET, JUNE 30, 1890.

ASSETS.

Cost of road	$4,138,584.99	
Cost of equipment	415,336.03	
Total permanent investments		$4,553,921.02
Cash	$1,617.03	
Debit balances	4,004.81	
Worcester, Nashua & Rochester Railroad stock	35,300.00	

* This railroad is leased to and operated by the Boston & Maine Railroad.

Total cash assets		$40,921.84
Profit and loss balance		279,844.44
Total assets (as per books of the company)		$4,874,687.30

LIABILITIES.

Capital stock		$3,099,800.00
Funded debt		1,540,000.00
Unfunded debt, viz.:		234,887.30
Interest unpaid	$725.00	
Notes payable	215,000.00	
Vouchers and accounts	641.47	
Accrued interest not due	18,520.83	
Total liabilities (as per books of the company)		$4,874,687.30

DESCRIPTION OF ROAD.

Main line of road from Worcester, Mass., to Rochester, N. H.	94.48 miles.
Main line of road in New Hampshire	55.02 "
" " in Massachusetts	39.46 "
Double track on main line	18.13 "
Total road belonging to this company	94.48 "
Sidings and other tracks not above enumerated	29.47 "
Same in New Hampshire	13.22 "
Total length of track, computed as single track	142.08 "
Same in New Hampshire	68.24 "
Total length of steel rails in tracks, not including steel-top rails	89.00 "
[Weights per yard, 58 to 60 lbs.]	

EQUIPMENT.

The rolling stock is leased to the Boston & Maine Railroad.

BRIDGES.

Number of trestle bridges of 25 feet length and upwards *		14
Aggregate length of same for single track	1,398.14 ft.	
Number of spans of iron bridges of 25 feet and upward *		2

* In New Hampshire, on miles of road owned.

Aggregate length of same for single track	54 ft.	
Number of spans of timber bridges of 25 feet and upwards *		13
Aggregate length of same for single track	362 ft.	
Number of crossings of highways at grade *		98
" " " over railroad		3
" " " under railroad		2
Number of highway bridges 18 feet above track		3
Number of highway bridges less than 18 feet above track		2
Number of crossings at which gates or flagmen are maintained		7
Number of crossings at which there are neither signals nor flagmen *		91
Number of railroad crossings at grade:		4
Nashua & Lowell in Nashua.		
Nashua & Acton in Nashua.		
Manchester & Lawrence in Windham.		
Portsmouth & Concord in Epping.		

CAPITAL STOCK.

Capital stock authorized by charter	$3,600,000	
Capital stock authorized by votes of company	3,099,800	
Capital stock issued (number of shares, 30,998); amount paid in		$3,099,800.00
Total amount paid in (as per books of the company)		3,099,800.00
Total number of stockholders	825	
Number of stockholders in New Hampshire	187	
Amount of stock held in New Hampshire	$757,100	

DEBT.

Funded debt, as follows:		
Mortgage bonds due April 1, 1893; rate of interest, 5 per cent		$250,000.00
Interest paid on same during year	$12,500.00	
Mortgage bonds due April 1, 1894; rate of interest, 5 per cent		565,000.00
Interest paid on same during year	$27,650.00	
Mortgage bonds due February 1, 1895; rate of interest, 5 per cent		400,000.00
Interest paid on same during year	$20,000.00	
Mortgage bonds due January 1, 1906; rate of interest, 4 per cent		150,000.00
Interest paid on same during year	$6,000.00	
Mortgage bonds due January 1, 1930; rate of interest, 4 per cent		175,000.00
Interest paid on same during year	$432.78	
Total amount of funded debt		$1,540,000.00

* On miles of road owned in New Hampshire.

NAMES AND RESIDENCES OF OFFICERS.

James P. Cook, *President*, Salem, Mass.; Elijah B. Stoddard, *Auditor*, Worcester, Mass.; T. W. Hammond, *Treasurer* and *Clerk of Corporation*, Worcester, Mass.

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

James P. Cook, Salem, Mass.; Charles A. Sinclair, Frank Jones, Portsmouth, N. H.; George C. Lord, Newton, Mass.; Elijah B. Stoddard, Worcester, Mass.; George W. Armstrong, Brookline, Mass.; Frank A. McKean, John A. Spalding, Charles Holman, Nashua, N. H.

PROPER ADDRESS OF THE COMPANY.

WORCESTER, NASHUA & ROCHESTER RAILROAD COMPANY,

WORCESTER, MASS.

JAMES P. COOK,
E. B. STODDARD,
GEORGE W. ARMSTRONG,
J. A. SPALDING,
FRANK A. McKEAN,
Directors.
T. W. HAMMOND, *Treasurer.*

STATE OF NEW HAMPSHIRE.

HILLSBOROUGH SS. NASHUA, N. H., August 25, 1890. Then personally appeared J. A. Spalding and Frank A. McKean, and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

W. E. SPALDING,
Justice of the Peace.

COMMONWEALTH OF MASSACHUSETTS.

SUFFOLK ss. September 3, 1890. Then personally appeared James P. Cook, George W. Armstrong, and T. W. Hammond, and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

HENRY T. GOOLD,

Justice of the Peace.

WORCESTER ss. August 26, 1890. Then personally appeared E. B. Stoddard and T. W. Hammond, and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

J. STEWART BROWN,

Justice of the Peace.

REPORT

OF THE

CHESHIRE RAILROAD COMPANY

FOR THE YEAR ENDING JUNE 30, 1890.

GENERAL EXHIBIT FOR THE YEAR.		
Total income		$645,828.89
Total expense (including taxes)		451,621.63
Net income		194,207.26
Rentals		31,917.43
Miscellaneous income, interest, etc.	$31,917.43	
Interest accrued during year:		126,538.49
On funded debt	$48,000.00	
Taxes	26,310.88	
On other debt	1,227.61	
Rent V. & M. Div., F. R. R.	51,000.00	
Balance for the year		99,586.20
Balance at commencement of year (surplus)	$48,361.91	
Deduct deficit for year ending June 30, 1890	26,413.80	
Balance June 30, 1890 (surplus)		21,948.11
Deduct dividend (6 per cent)	$126,000.00	

ANALYSIS OF EARNINGS.	
From local passengers (all passengers starting from or stopping at any station on this road) *	$54,635.13
From through passengers (to and from other roads over and beyond this road)	130,818.06
From express and extra baggage	7,500.00
From mails	9,943.48
Total earnings from passenger department	202,896.67

* Including passengers to and from other roads starting from or stopping at stations on this road.

From local freight (all freight starting from or stopping at any station on this road) *		$23,050.07
From through freight (to and from other roads over and beyond this road)		419,882.15
Total earnings from freight department		442,932.22
Total transportation earnings		645,828.89
Income from all other sources, viz.:		31,917.43
Interest	$10,049.00	
Miscellaneous	21,868.43	
Total income from all sources		$677,746.32

ANALYSIS OF EXPENSES.

Salaries of general officers and clerks	$16,708.24
Legal expenses	675.50
Insurance	1,479.12
Stationery and printing	3,458.02
Outside agencies and advertising	3,513.58
Contingencies and miscellaneous	3,100.82
Repairs of bridges (including culverts and cattle-guards)	3,810.88
Repairs of buildings	6,135.40
Repairs of fences, road-crossings, and signs	634.03
Renewal of rails	2,973.34
Renewal of ties	14,271.71
Repairs of roadbed and track	34,946.58
Repairs of locomotives	29,731.95
Fuel for locomotives	109,316.43
All other supplies for locomotives	6,083.92
Water supply	682.54
Oil and waste, included in train and station supplies.	
Locomotive service †	49,497.86
Repairs of passenger cars	6,956.32
Passenger-train service †	9,558.06
Passenger-train supplies	2,521.02
Mileage passenger cars ‡	1,782.50
Repairs of freight cars	18,722.52
Freight-train service †	39,676.64
Freight-train supplies	2,775.82
Mileage freight cars ‡	38,135.29
Telegraph expenses	4,086.16
Loss and damage, freight and baggage	254.85
Loss and damage, property and cattle	200.00
Personal injuries	2,930.75
Agents' and station service †	34,339.80
Station supplies	2,661.98
Total operating expenses	$451,621.63

* Including freight to and from other roads starting from or stopping at stations on this road.

† Salaries and wages. ‡ Debit balances.

PROPERTY ACCOUNTS: CHARGES AND CREDITS DURING THE YEAR.	
Superstructure, including rails	$20,272.52
Passenger and freight stations, wood-sheds, and water-stations	3,700.00
Engineering, agencies, salaries, and other expenses during construction	3,749.27
Total for construction	$27,721.79
Locomotives (4)	33,800.00
Passenger, mail, and baggage cars (2) *	16,683.00
Freight and other cars	11,200.00
Total charges to property accounts	$89,404.79
Net addition to property accounts for the year	89,404.79

BALANCE-SHEET, JUNE 30, 1890.

ASSETS.		
Cost of road and equipment	$2,836,265.01	
Total permanent investments		$2,836,265.01
Cash	$53,152.79	
Bills receivable	236,309.19	
Materials and supplies	99,536.89	
Total cash assets		$388,998.87
Total assets (as per books of the company)		$3,242,577.47

LIABILITIES.		
Capital stock		$2,153,300.00
Funded debt		800,000.00
Unfunded debt, viz.:		267,329.36
Interest unpaid	$1,865.36	
Dividends unpaid	279.00	
Notes payable	240,000.00	
Vouchers and accounts	25,185.00	
Profit and loss balance (surplus)		21,948.11
Total liabilities (as per books of the company)		$3,242,577.47

MILEAGE, TRAFFIC, ETC.	
Passenger-train mileage	189,363
Freight-train mileage	517,939
Total revenue train mileage	707,302

* Including $5,635, for steam heating.

Switching-train mileage	63,055
Other train mileage	23,800
Total train mileage	794,157
Number of local passengers (including season)	120,351
Number of through passengers (to and from other roads going over and beyond this road)	97,132
Total number of passengers carried	217,483
Local passenger mileage (local passengers carried one mile)	2,125,828
Through passenger mileage (through passengers carried one mile)	4,138,882
Total passenger mileage	6,264,710
Number tons local freight	23,692
Number tons through freight (to and from other roads going over and beyond this road)	835,692
Total number tons freight carried	859,384
Local freight mileage (tons local freight carried one mile)	522,948
Through freight mileage (tons through freight carried one mile) *	47,717,115
Total freight mileage	48,240,063
Average number of persons employed	424

DESCRIPTION OF ROAD.

Main line of road from Bellows Falls, Vt., to Ashburnham Junction, Mass.	53.62 miles.
Main line of road in New Hampshire	42.81 "
" " in Massachusetts	10.81 "
Total road belonging to this company	53.62 "
Sidings and other tracks not above enumerated	20.32 "
Same in New Hampshire	16.93 "
Total length of track, computed as single track	73.94 "
Same in New Hampshire	59.74 "
Total length of steel rails in tracks, not including steel-top rails	53.62 "
[Weights per yard, 60 and 72 lbs.]	

Roads and Branches belonging to other Companies, operated by this Company under lease or contract.

Monadnock R. R., length	15.82 miles.
Fitchburg R. R., Ashburnham Junction to Fitchburg, length	10.39 "
Total length of above roads	26.21 "
" " " in New Hampshire	13.75 "
" " " in Massachusetts	12.46 "
Total miles of road operated by this company	64.01 "

* Carried to and from other roads.

Total miles of road operated by this company in New Hampshire	42.81 miles.
Number of stations in New Hampshire on all roads operated by this company	14
Number of telegraph offices in same	10
Number of stations on all roads owned by this company	16
Same in New Hampshire	13

EQUIPMENT.

Number of locomotives	34
Number of passenger cars	29
Number of baggage, mail, and express cars	11
Number of freight cars (basis of 8 wheels)	506
Number of other cars	38

LIST OF ACCIDENTS.

	From causes beyond their own control (in New Hampshire).		From their own misconduct or carelessness (in New Hampshire).		Total in New Hampshire.		Total on whole road operated.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
Passengers	.....	.....	.....	.....	.....	.....	.....	.....
Employés	2	.....	4	1	6	1	7	2
Others	.....	.....	3	2	3	2	3	2

STATEMENT OF EACH ACCIDENT IN NEW HAMPSHIRE.

September 21, 1889. — Martin Hynes, run over on track near engine-house, Keene, and killed; was a trespasser.

October 8. — Charles E. Fowle, fireman, looking out of cab window near Westmoreland, head struck car on side track; soon recovered.

October 19. — Clark Stebbens, a trespasser on track at Keene, run over, lost an arm and bruised his head.

November 3. — Walter Cooper, a deaf man, walking on track near Westmoreland, struck by train, ankle fractured.

December 23. — Harvey Field, brakeman, fell from train near Fitzwilliam and was killed.

January 6, 1890. — Sidney Slate, engineer, and Charles W. Gib-

son, fireman, near Westmoreland, both killed by head collision of freight trains.

January 21. — David Higgins, brakeman, killed near Westmoreland while shackling cars.

January 24. — Arthur Begoin, a trespasser, struck by freight train in Keene yard and killed.

February 26. — At Fitzwilliam, Morris Mahony, a trespasser on a train, jumped from a freight train, was run over and killed.

March 19. — Edward Duffy, brakeman, fell between the cars of a moving freight train at Westmoreland and was killed.

March 25. — John Hussey, freight brakeman, killed in Keene yard while shackling cars.

GENERAL INFORMATION.

Maximum weight of locomotives in working order.	48	tons.
Average " " " "	34	"
Maximum weight of tenders full of fuel and water.	25	"
Average " " " "	19	"
Maximum weight of passenger cars . . .	20	"
Average " " " . . .	18	"
" " mail and baggage cars . .	13.5	"
" " 8-wheel box freight cars . .	9.5	"
" " 8-wheel platform cars . .	7.5	"
Length of heaviest engine and tender, from center of forward truck-wheel of engine to center of rear wheel of tender	46½	feet.
Total length of heaviest engine and tender over all.	55	"
Number of locomotives equipped with train brake. [Kind of brake, Westinghouse.]	8	
Number of cars equipped with train brake . . [Kind of brake, Westinghouse.]	40	
Number of passenger cars with Miller platform and buffer	40	
Number of miles of road operated by this company not furnished with telegraph facilities: . . From Peterborough, N. H., to Winchendon, Mass.	16	miles.
Charges for the transportation of company's supplies, at the rate of ½ cent per ton per mile, are included in the earnings as reported for this road.		

BRIDGES.

Number of spans of stone bridges of 25 feet and upwards *	1
Number of spans of iron bridges of 25 feet length and upwards *	2
Number of spans of timber bridges of 25 feet and upwards *	11

* In New Hampshire on miles of road owned.

Number of crossings of highways at grade * . .	33
" " " over railroad .	6
" " " under railroad .	5
Number of highway bridges 18 feet above track .	8
Number of crossings at which gates or flagmen are maintained	2
Number of crossings at which there are neither signals nor flagmen *	31

RATES OF FARE, ETC.

Average rate of fare per mile (not including season tickets) for local passengers on roads operated by this company †	2.56 cents.
Average rate of fare per mile received from passengers to and from other roads	3.16 "
Average rate of fare per mile for season-ticket passengers ‡	1.51 "
Average rate of fare per mile received from all passengers	2.96 "
Average rate of local freight per ton per mile † .	4.40 "
Average rate of freight per ton per mile received from freight to and from other roads . . .	.88 "
Average rate of freight per ton per mile received from all freight	.92 "

CAPITAL STOCK.

Total amount paid in (as per books of the company)	$2,153,300.00
Total number of stockholders . . . 515	
Number of stockholders in New Hampshire . 38	
Amount of stock held in New Hampshire, $350,600	

DEBT.

Funded debt, as follows:		
Bonds due July 1, 1896; rate of interest, 6 per cent		$250,000.00
Interest paid on same during year	$15,000.00	
Bonds due July 1, 1898; rate of interest, 6 per cent		550,000.00
Interest paid on same during year	$33,000.00	
Total amount of funded debt		$800,000.00

NAMES AND RESIDENCES OF OFFICERS.

Wm. A. Russell, *President*, Lawrence, Mass.; Edward C. Thayer, *Vice-President*, Keene, N. H.; R. Stewart, *General Manager*, Keene,

* In New Hampshire, on miles of road owned. † Rates as per tariff.
‡ Reckoning twelve passengers per week for each season ticket.

N. H.; J. W. Dodge, *General Freight Agent*, Keene, N. H.; F. H. Kingsbury, *General Passenger Agent*, Keene, N. H.; F. H. Kingsbury, *Treasurer*, Keene, N. H.; R. Stewart, *Clerk of Corporation*, Keene, N. H.

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

Wm. A. Russell, George W. Russell, Lawrence, Mass.; Edward C. Thayer, De Los C. Ball, Keene, N. H.; Wm. H. Hill, Brookline, Mass.; Hales W. Suter, A. N. Burbank, Boston, Mass.

PROPER ADDRESS OF THE COMPANY.

CHESHIRE RAILROAD COMPANY,

KEENE, N. H.

WM. A. RUSSELL,
EDWARD C. THAYER,
WILLIAM H. HILL,
A. N. BURBANK,
Directors.
F. H. KINGSBURY,
Treasurer.
R. STEWART,
Superintendent.

COMMONWEALTH OF MASSACHUSETTS.

SUFFOLK SS. October 10, 1890. Then personally appeared Wm. A. Russell, Edward C. Thayer, Wm. H. Hill, A. N. Burbank, F. H. Kingsbury, R. Stewart, and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

GEORGE O. G. COALE,
Notary Public.

REPORT

OF THE

MONADNOCK RAILROAD COMPANY

FOR THE YEAR ENDING JUNE 30, 1890.

GENERAL EXHIBIT FOR THE YEAR.		
Total income		$12,455.11
Total expense (including taxes)		513.50
Net income		11,941.61
Interest accrued during year:		2,400.00
On funded debt	$2,400.00	
Balance for the year		6,000.00
Balance at commencement of year		3,530.26
Balance June 30, 1890		3,541.61

BALANCE-SHEET, JUNE 30, 1890.

ASSETS.		
Cost of road	$371,701.76	
Stock (non-paying)	3,090.00	
Total permanent investments		$374,791.76
Cash	$3,541.61	
Total cash assets		3,541.61
Total assets (as per books of the company)		$378,333.37

LIABILITIES.	
Capital stock	$205,400.00
Funded debt	48,000.00
Profit and loss balance	124,933.37
Total liabilities (as per books of the company)	$378,333.37

DESCRIPTION OF ROAD.

Main line of road	15.800 miles.
" " in New Hampshire	13.762 "
" " in Massachusetts	2.038 "
Total length of road owned by company in New Hampshire	13.762 "
Total length of road owned by company in Massachusetts	2.038 "
Sidings and other tracks not above enumerated	.700 "
Total length of track, computed as single track [Weights per yard, 50 lbs.]	16.500 "
Total miles of road operated by this company	15.800 "
Total miles of road operated by this company in New Hampshire	13.762 "
Number of stations in New Hampshire on all roads operated by this company	4
Number of stations on all roads owned by this company	5
Same in New Hampshire	4

BRIDGES.

Number of highway crossings at grade *	11

CAPITAL STOCK.

Capital stock authorized by charter	$350,000	
Capital stock authorized by votes of company	250,000	
Capital stock issued; amount paid in		$205,400.00
Total amount paid in (as per books of the company)		205,400.00
Total number of stockholders	5	
Number of stockholders in New Hampshire	3	
Amount of stock held in New Hampshire, †	$103,000	

DEBT.

Funded debt, as follows:		
Bonds due; rate of interest, 5 per cent		$48,000.00
Interest paid on same during year	$2,400.00	
Total amount of funded debt		$48,000.00

NAMES AND RESIDENCES OF OFFICERS.

Henry K. French, *President*; Peter Upton, *Auditor*; John H. Cutler, *Treasurer*; John H. Cutler, *Clerk of Corporation.*

* In New Hampshire, on miles of road owned. † 54 shares non-paying.

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

Henry K. French, Peterborough, N. H.; Rodney Wallace, Fitchburg, Mass.; Edward C. Thayer, Keene, N. H.; Henry S. Marcy, Boston, Mass.; John H. Fairbank, Winchendon, Mass.; Peter Upton, Oscar H. Bradley, East Jaffrey, N. H.

PROPER ADDRESS OF THE COMPANY.

MONADNOCK RAILROAD COMPANY,

PETERBOROUGH, N. H.

HENRY K. FRENCH,
For the Directors.
JOHN H. CUTLER,
Treasurer.

STATE OF NEW HAMPSHIRE.

HILLSBOROUGH ss. August 25, 1890. Then personally appeared Henry K. French and John H. Cutler, and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

JOHN R. MILLER,
Justice of the Peace.

REPORT

OF THE

LESSEES OF THE MONADNOCK RAILROAD COMPANY

FOR THE YEAR ENDING JUNE 30, 1890.

GENERAL EXHIBIT FOR THE YEAR.		
Total income		$41,919.10
Total expense (including taxes)		28,340.36
Net income		13,578.74
Rentals:		12,000.00
Monadnock Railroad	$12,000.00	
Balance June 30, 1890		1,578.74

ANALYSIS OF EARNINGS.		
From local passengers (all passengers starting from or stopping at any station on this road) *		$4,669.48
From through passengers (to and from other roads over and beyond this road)		7,499.75
From express and extra baggage		1,000.00
From mails		935.60
Total earnings from passenger department		14,104.83
From local freight (all freight starting from or stopping at any station on this road) *		5,877.56
From through freight (to and from other roads over and beyond this road)		20,984.04
Total earnings from freight department		26,861.60
Total transportation earnings		40,966.43
Income from all other sources, viz.:		952.67
Rents, labor, etc.	$952.67	
Total income from all sources		$41,919.10

* Including passengers and freight to and from other roads starting from stopping at stations on this road.

ANALYSIS OF EXPENSES.	
Salaries of general officers and clerks	$1,200.00
Stationery and printing	300.00
Outside agencies and advertising	20.00
Contingencies and miscellaneous	16.20
Repairs of buildings	118.65
Repairs of fences, road-crossings, and signs	182.17
Renewal of rails	670.95
Renewal of ties	4,255.29
Repairs of roadbed and track	7,894.05
Repairs of locomotives	686.49
Fuel for locomotives	3,688.32
Water supply	107.50
Locomotive service *	1,845.35
Repairs of passenger cars	688.89
Passenger-train service *	1,163.83
Passenger-train supplies	26.70
Repairs of freight cars	39.43
Freight-train service *	1,002.71
Freight-train supplies	5.00
Telegraph expenses	12.00
Loss and damage, freight and baggage	19.52
Agents' and station service *	2,482.00
Station supplies	184.69
Total operating expenses	$26,609.74
Taxes, state } Taxes, local }	1,730.62
Total operating expenses and taxes	$28,340.36

MILEAGE, TRAFFIC, ETC.	
Passenger-train mileage	15,720
Freight-train mileage	14,248
Total revenue train mileage	29,968
Switching-train mileage	2,700
Other train mileage	1,300
Total train mileage	33,968
Number of local passengers (including season)	19,206
Number of through passengers (to and from other roads going over and beyond this road)	12,549
Total number of passengers carried	31,755
Local passenger mileage (local passengers carried one mile)	182,190
Through passenger mileage (through passengers carried one mile)	152,372
Total passenger mileage	334,562
Number tons local freight	4,682

* Salaries and wages.

Number tons through freight (to and from other roads going over and beyond this road) . .	48,451
Total number tons freight carried . . .	53,133
Local freight mileage (tons local freight carried one mile)	50,647
Through freight mileage (tons through freight carried one mile) *	703,025
Total freight mileage	753,672
Average number of persons employed . . .	25

DESCRIPTION OF ROAD.

Main line of road from Peterborough to Winchendon	15.800 miles.
Main line of road in New Hampshire . . .	13.762 "
" " in Massachusetts . . .	2.038 "
Sidings and other tracks not above enumerated .	1.200 "
Same in New Hampshire	1.200 "
Total length of track, computed as single track .	16.920 "
Same in New Hampshire	14 880 "
Total length of steel rails in tracks, not including steel-top rails . . . . . [Weight per yard, 50 and 60 lbs.]	7.000 "

GENERAL INFORMATION.

Number of miles of road operated by this company not furnished with telegraph facilities: . . From Peterborough to Winchendon.	15.80 miles.
Charges for the transportation of company's supplies, at the rate of ½ cent per ton per mile, are included in the earnings as reported for this road.	

RATES OF FARE, ETC.

Average rate of fare per mile (not including season tickets) for local passengers on roads operated by this company †	3.390 cents.
Average rate of fare per mile received from passengers to and from other roads	4.100 "
Average rate of fare per mile received from all passengers	3.640 "
Average rate of local freight per ton per mile † .	11.610 "
Average rate of freight per ton per mile received from freight to and from other roads . . .	2.950 "
Average rate of freight per ton per mile received from all freight	4.095 "

* Carried to and from other roads. † Rates as per tariff.

WM. A. RUSSELL,
EDWARD C. THAYER,
WILLIAM H. HILL,
A. N. BURBANK,
Directors.
F. H. KINGSBURY,
Treasurer.
R. STEWART,
Superintendent.

COMMONWEALTH OF MASSACHUSETTS.

SUFFOLK ss. October 10, 1890. Then personally appeared Wm. A. Russell, Edward C. Thayer, William H. Hill, A. N. Burbank, F. H. Kingsbury, R. Stewart, and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

GEORGE O. G. COALE,
Notary Public.

REPORT

OF THE

FITCHBURG RAILROAD COMPANY

FOR THE YEAR ENDING JUNE 30, 1890.

GENERAL EXHIBIT FOR THE YEAR.

Total income		$6,259,533.33
Total expense (including taxes)		4,525,605.84
Net income		1,733,927.49
Rentals:		271,980.00
Vermont & Mass. R. R.	$244,580.00	
Southern Vermont R. R.	12,000.00	
Troy & Bennington R. R.	15,400.00	
Interest accrued during year:		807,416.44
On funded debt	$799,153.00	
On other debt	8,263.44	
Dividends declared (2 per cent)		261,835.60
Balance for the year (surplus)	$392,695.45	
Balance at commencement of year	286,213.19	
		678,908.64
Deduct:		
Bleachery fire award	$252,871.34	
Railroad commissioners' award	7,891.94	
Coyle claim	6,202.35	
Lancaster R. R.	17,635.51	
B., H. T. & W. R. R.	14,990.00	
	$299,591.14	
Surplus for nine months to June 30, 1890, carried to credit of improvement fund	96,645.02	
		396,236.16
Balance June 30, 1890 (surplus)		282,672.48

ANALYSIS OF EARNINGS.

From local passengers (all passengers starting from or stopping at any station on this road) *		$440,569.67
From through passengers (to and from other roads over and beyond this road)		1,315,195.10
From express and extra baggage		163,472.16
From mails		47,384.34
From other sources, passenger department		28,472.96
Total earnings from passenger department		1,995,094.23
From local freight (all freight starting from or stopping at any station on this road) *		1,022,489.38
From through freight (to and from other roads over and beyond this road)		2,857,762.56
From other sources, freight department		81,523.78
Total earnings from freight department		3,961,775.72
Total transportation earnings		5,956,869.95
Rents for use of roads		58,500.00
Income from all other sources, viz.:		244,163.38
Rent of property	$42,660.49	
Elevator, wharves, etc.	184,644.89	
Miscellaneous	16,858.00	
Total income from all sources		$6,259,533.33

ANALYSIS OF EXPENSES.

Salaries of general officers and clerks	$163,452.52
Legal expenses	15,883.35
Insurance	25,098.54
Stationery and printing	36,094.40
Outside agencies and advertising	68,483.58
Contingencies and miscellaneous	40,142.40
Repairs of bridges (including culverts and cattle-guards)	55,288.57
Repairs of buildings	162,605.13
Repairs of fences, road-crossings, and signs	19,824.00
Renewal of rails	110,307.62
Renewal of ties	114,362.96
Repairs of roadbed and track	429,178.80
Repairs of locomotives	266,149.38
Fuel for locomotives	515,526.12
Water supply	26,009.60
Oil and waste	28,172.62
Locomotive service †	472,555.63
Repairs of passenger cars	105,580.97
Passenger-train service †	144,302.20
Passenger-train supplies	15,593.67

* Including passengers and freight to and from other roads starting from or stopping at stations on this road. † Salaries and wages.

Mileage passenger cars *	$26,322.70
Repairs of freight cars	296,924.74
Freight-train service †	405,748.42
Freight-train supplies	21,968.32
Mileage freight cars *	78,177.43
Telegraph expenses	63,739.86
Loss and damage, freight and baggage	9,787.78
Loss and damage, property and cattle	7,500.13
Personal injuries	42,044.61
Agents' and station service †	548,247.23
Station supplies	34,934.68
Total operating expenses	$4,350,007.96
Taxes, state / Taxes, local	175,597.88
Total operating expenses and taxes	$4,525,605.84

PROPERTY ACCOUNTS: CHARGES AND CREDITS DURING THE YEAR.

Land, land damages, and fences (credit)		$730.44
Engine-houses, car-sheds, and turn-tables		14,958.05
Machine-shops		57,278.03
Purchase of other roads:		1,900.00
T. & G. R. R. and H. T.	$400	
B., H. T. & W. R. R.	1,500	
Shops, machinery, and tools		4,331.19
New freight yards		14,641.54
Docks and elevators		9,893.25
Construction not apportioned		77,894.89
Total for construction		$180,166.51
Locomotives and steam-heating		$94,991.66
Passenger, mail, and baggage cars and steam heating		14,658.24
Freight and other cars and steam heating		84,054.27
Total for equipment		$193,704.17
Total charges to property accounts		373,870.68
Net addition to property accounts for the year		373,870.68

BALANCE-SHEET, JUNE 30, 1890.

ASSETS.

Cost of road	$33,525,312.86
Cost of equipment	3,733,601.16
Bonds Boston, Barre & Gardner R. R.	90,600.00

* Debit balances. † Salaries and wages.

Vermont & Massachusetts improvements	$1,491,000.54	
Total permanent investments		$38,840,514.56
Cash	$557,312.91	
Bills receivable	109,265.00	
Due from agents and companies	985,788.42	
Materials and supplies	765,663.48	
Debit balances	553,376.00	
Total cash assets		2,971,405.81
Total assets (as per books of the company)		$41,811,920.37

LIABILITIES.

Capital stock		$20,775,100.00
Funded debt		18,534,600.00
Unfunded debt, viz.:		2,122,902.87
Accrued taxes not due	$109,149.40	
Interest unpaid	11,665.50	
Accrued interest not due	229,927.33	
Dividends unpaid	262,433.80	
Notes payable	780,000.00	
Accrued rentals not due	64,645.00	
Vouchers and accounts	665,081.84	
Improvement fund		96,645.02
Profit and loss balance (surplus)		282,672.48
Total liabilities (as per books of the company)		$41,811,920.37

MILEAGE, TRAFFIC, ETC.

Passenger-train mileage		1,893,601
Freight-train mileage		2,482,579
Total revenue train mileage		4,376,180
Switching-train mileage		1,205,842
Other train mileage		59,334
Total train mileage		5,641,356
Number of season-ticket passengers *	343,046	
Number of local passengers (including season)		5,480,847
Number of through passengers (to and from other roads going over and beyond this road)		414,355
Total number of passengers carried		5,895,202
Local passenger mileage (local passengers carried one mile)		70,379,893
Through passenger mileage (through passengers carried one mile)		21,325,141
Total passenger mileage		91,705,034
Number tons local freight		989,258

* Reckoning twelve passengers per week for time of each season ticket.

Number tons through freight (to and from other roads going over and beyond this road)	2,982,060
Total number tons freight carried	3,971,318
Local freight mileage (tons local freight carried one mile)	41.715,948
Through freight mileage (tons through freight carried one mile) *	348,363,874
Total freight mileage	390,079,822
Average number of persons employed	4,487

DESCRIPTION OF ROAD.

Main line of road from Boston to Fitchburg and from Greenfield to Troy and Rotterdam	189.96	miles.
Main line of road in New York	89.47	"
" " in Vermont	6.49	"
" " in Massachusetts	94.00	"
Double track on main line	100.56	"
Branches owned by this company, viz.:		
Ice track, Boston (double track)	.68	"
Watertown (single track)	8.26	"
Marlborough (single track)	12.42	"
Peterborough & Shirley (single track)	23.62	"
Worcester (single track)	36.00	"
Ashburnham (single track)	2.59	"
Saratoga & Schuylerville (single track)	25.52	"
Total length of branches owned by company	109.09	"
Total length of branches owned by this company in New Hampshire	9.47	"
Total length of branches owned by this company in Massachusetts	74.10	"
Total length of branches owned by this company in New York	25.52	"
Double track on branches	.68	"
Total road belonging to this company	299.05	"
Sidings and other tracks not above enumerated	188.48	"
Total length of track, computed as single track	588.77	"
Same in New Hampshire	9.47	"
Total length of steel rails in tracks, not including steel-top rails	478.00	"
[Weights per yard, 60, 72, and 76 lbs.]		

Roads and Branches belonging to other Companies, operated by this Company under lease or contract.

Vermont & Massachusetts R. R., length	56.00	miles.
Turner's Falls Branch of V. & M. R. R., length	2.80	"
Troy & Bennington R. R., length	5.04	"

* Carried to and from other roads.

Southern Vermont R. R., length	6.19	miles.
Total length of above roads	70.03	"
" " " in Vermont	6.19	"
" " " in Massachusetts	58.80	"
" " " in New York	5.04	"
Total miles of road operated by this company	369.08	"
Total miles of road operated by this company in New Hampshire	9.47	"
Number of stations in New Hampshire on all roads operated by this company	3	
Number of telegraph offices in same	1	
Number of stations on all roads owned by this company	124	
Same in New Hampshire	3	

EQUIPMENT.

	Leased.	Owned.	Total.
Number of locomotives	8	179	187
Number of passenger cars	7	165	172
Number of parlor or sleeping cars			
Number of baggage, mail, and express cars	3	37	40
Number of freight cars (basis of 8 wheels)	361	5,207½	5,568½
Number of other cars		306	306

LIST OF ACCIDENTS.

	From causes beyond their own control (in New Hampshire).		From their own misconduct or carelessness (in New Hampshire).		Total in New Hampshire.		Total on whole road operated.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
Passengers								2
Employés							10	60
Others							27	24

GENERAL INFORMATION.

Maximum weight of locomotives in working order .	$58\frac{3}{10}$ tons.
Average " " " "	39 "
Maximum weight of tenders full of fuel and water	35 "
Average " " " "	$26\frac{1}{4}$ "
Maximum weight of passenger cars . . .	23 "
Average " " . . .	20 "
" " mail and baggage cars . .	18 "
" " 8-wheel box freight cars .	10 "
" " 4-wheel " " .	$4\frac{1}{2}$ "
" " 8-wheel platform cars . .	$7\frac{1}{2}$ "
" " 4-wheel " " . .	3 "
Length of heaviest engine and tender, from center of forward truck-wheel of engine to center of rear wheel of tender	46 feet 9 in.
Total length of heaviest engine and tender over all	57 feet 9 in.
Number of locomotives equipped with train brake . [Kind of brake, Westinghouse.]	138
Number of cars equipped with train brake . . [Kind of brake, Westinghouse.]	863
Number of passenger cars with Miller platform and buffer	212
Number of miles of road operated by this company not furnished with telegraph facilities: . . From Ashburnham Junction to Ashburnham 2.59	2.59 miles.

BRIDGES.

Number of spans of iron bridges of 25 feet and upwards *	6
Aggregate length of same for single track 695 ft.	
Number of crossings of highways at grade * . .	8
" " " under railroad .	2

RATES OF FARE, ETC.

Average rate of fare per mile (not including season tickets) for local passengers on roads operated by this company †	1.960 cents.
Average rate of fare per mile received from passengers to and from other roads	2.070 "
Average rate of fare per mile for season-ticket passengers ‡	.710 "
Average rate of fare per mile received from all passengers	1.910 "
Average rate of local freight per ton per mile † .	2.650 "
Average rate of freight per ton per mile received from freight to and from other roads . . .	.820 "
Average rate of freight per ton per mile received from all freight	1.015 "

* In New Hampshire, on miles of road owned. † Rates as per tariff.
‡ Reckoning twelve passengers per week for time of each season ticket.

CAPITAL STOCK.		
Capital stock authorized by charter:		
For double track, per mile . . .	$100,000	
For single track, per mile . . .	70,000	
For terminal at Boston	3,000,000	
Capital stock authorized by votes of company	20,775,100	
Capital stock issued (number of shares, 207,751); amount paid in		$20,775,100.00
Total amount paid in as per books of the company		20,775,100.00
Total number of stockholders . . .	4,314	
Number of stockholders in New Hampshire	263	
Amount of stock held in New Hampshire	$370,000	
DEBT.		
Funded debt, as follows:		
Plain bonds due April 1, 1894; rate of interest, 7 per cent		$500,000.00
Interest paid on same during year	$35,385.00	
Plain bonds due October 1, 1897; rate of interest, 6 per cent		500,000.00
Interest paid on same during year	$30,180.00	
Plain bonds due October 1, 1899; rate of interest, 5 per cent		500,000.00
Interest paid on same during year	$26,100.00	
Plain bonds due October 1, 1900; rate of interest, 5 per cent		500,000.00
Interest paid on same during year	$24,950.00	
Plain bonds due October 1, 1901; rate of interest, 5 per cent		500,000.00
Interest paid on same during year	$24,850.00	
Plain bonds due April 1, 1902; rate of interest, 5 per cent		500,000.00
Interest paid on same during year	$25,000.00	
Plain bonds due April 1, 1903; rate of interest, 5 per cent		500,000.00
Interest paid on same during year	$25,000.00	
Plain bonds due March 1, 1904; rate of interest, 4 per cent		500,000.00
Interest paid on same during year	$20,000.00	
Plain bonds due June 1, 1905; rate of interest, 4 per cent		500,000.00
Interest paid on same during year	$19,460.00	
Plain bonds due February 1, 1937; rate of interest, 3 per cent		5,000,000.00
Interest paid on same during year	$150,000.00	
Plain bonds due April 1, 1907; rate of interest, 4 per cent		1,500,000.00
Interest paid on same during year	$59,600.00	

Plain bonds due September 1, 1897; rate of interest, 4½ per cent		$2,250,000.00
Interest paid on same during year	$101,250.00	
Plain bonds due May 1, 1908; rate of interest, 5 per cent		2,000,000.00
Interest paid on same during year	$100,850.00	
Plain bonds due March 1, 1899; rate of interest, 5 per cent		750,000.00
Interest paid on same during year	$37,500.00	
Boston, Barre & Gardner R. R. 1st mortgage bonds, due April 1, 1893; rate of interest, 7 per cent		91,300.00
Interest paid on same during year	$6,380.50	
Boston, Barre & Gardner R. R. 1st mortgage bonds, due April 1, 1893; rate of interest, 5 per cent		299,700.00
Interest paid on same during year	$14,740.00	
Boston, Barre & Gardner R. R. 2d mortgage bonds, due July 1, 1895; rate of interest, 3 per cent		186,300.00
Interest paid on same during year	$5,589.00	
Boston, Barre & Gardner R. R. 3d mortgage bonds, due July 1, 1895; rate of interest, 6 per cent		57,300.00
Interest paid on same during year	$3,438.00	
Hoosac Tunnel Dock & Elevator Co.'s mortgage note, due April 5, 1892; rate of interest, 4 per cent		500,000.00
Interest paid on same during year	$20,000.00	
Boston, Hoosac Tunnel & Western R. R. debenture bonds, due September 1, 1913; rate of interest, 5 per cent		1,400,000.00
Interest paid on same during year	$70,000.00	
Total amount of funded debt		$18,534,600.00

NAMES AND RESIDENCES OF OFFICERS.

Henry S. Marcy, *President*, Boston, Mass.; John Whitmore, *General Traffic Manager*, Boston, Mass.; C. S. Anthony, *Auditor*, Waltham, Mass.; John Adams, *General Superintendent*, Boston, Mass.; A. S. Crane, *General Freight Agent*, Boston, Mass.; J. R. Watson, *General Passenger Agent*, Boston, Mass.; D. A. Gleason, *Treasurer*, West Medford, Mass.; Thomas Whittemore, *Clerk of Corporation*, Cambridge, Mass.

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

Henry S. Marcy, Robert Codman, David P. Kimball, Boston, Mass.; John Quincy Adams, Quincy, Mass.; Fred L. Ames, Easton, Mass.; George Heywood, Concord, Mass.; Rodney Wallace, Charles T. Crocker, Fitchburg, Mass.; James Renfrew, Jr., Adams, Mass.; W. S. Webb, Wm. H. Hollister, Augustus Kountze, New York; Francis Smith, Rockland, Me.

PROPER ADDRESS OF THE COMPANY.

FITCHBURG RAILROAD COMPANY,

BOSTON, MASS.

H. S. MARCY,
C. T. CROCKER,
WM. H. HOLLISTER,
ROBERT CODMAN,
JAMES RENFREW, JR.,
RODNEY WALLACE,
J. Q. ADAMS,
GEORGE HEYWOOD,
EDWARD C. THAYER,
Directors.
DANIEL A. GLEASON,
Treasurer.
JOHN ADAMS,
Superintendent.

COMMONWEALTH OF MASSACHUSETTS.

SUFFOLK SS. BOSTON, October 1890. Then personally appeared H. S. Marcy, C. T. Crocker, Wm. H. Hollister, Robert Codman, James Renfrew, Jr., Rodney Wallace, J. Q. Adams, George Heywood, Edward C. Thayer, Daniel A. Gleason, and John Adams, and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

THOMAS WHITTEMORE,
Justice of the Peace.

REPORT

OF THE

MOUNT WASHINGTON RAILROAD COMPANY

FOR THE YEAR ENDING JUNE 30, 1890.

GENERAL EXHIBIT FOR THE YEAR.

Total income			$26,678.28
Total expense (including taxes)			19,611.17
Net income			7,067.11
Interest accrued during year:			558.35
On unfunded debt		$558.35	
Dividends declared (7 per cent)			9,065.00
Balance for the year (deficit)		$2,556.24	
Notes paid		10,000.00	
			12,556.24
Balance at commencement of year		$17,053.57	
Add:			
Sales old rails	$282.63		
Interest	16.57		
		299.20	
		$17,352.77	
Deduct:			
Net difference ticket acct.			
Boston & Maine R. R.	$5.00		
Expense cutting wood	192.67		
		197.67	
Balance at commencement of year as so changed			17,155.10
Balance June 30, 1890 (surplus)			4,598.86

ANALYSIS OF EARNINGS.

From local passengers (all passengers starting from or stopping at any station on this road) *		$25,850.50
From through passengers (to and from other roads over and beyond this road)		
From mails		150.00
Total earnings from passenger department		26,000.50
Total transportation earnings		26,000.50
Income from all other sources, viz.:		677.78
Interest	$426.00	
Miscellaneous	251.78	
Total income from all sources		$26,678.28

ANALYSIS OF EXPENSES.

Salaries of general officers and clerks		$1,125.00
Legal expenses		626.57
Insurance		255.50
Stationery and printing / Outside agencies and advertising		46.50
Contingencies and miscellaneous		130.69
Repairs of bridges (including culverts and cattle-guards), buildings, fences, road-crossings, signs, roadbed and track, and renewal of rails and ties [No. tons steel laid, $21\frac{550}{2240}$.]		7,304.23
Repairs of locomotives		867.19
Fuel for locomotives [Cords of wood, 694.]		2,424.87
Oil and waste		111.00
Locomotive service †		1,779.87
Repairs of passenger cars		433.60
Passenger-train service †		1,009.00
Freight on supplies		44.38
Telegraph expenses and clerk		94.00
Station supplies:		1,377.06
Board of men and provisions	$1,115.30	
Housekeeper and cook	261.76	
Total operating expenses		$17,629.46
Taxes, state		1,981.71
Total operating expenses and taxes		$19,611.17

* Including passengers to and from other roads starting from or stopping at stations on this road. † Salaries and wages.

BALANCE-SHEET, JUNE 30, 1890.

ASSETS.

Cost of road and equipment	$139,500.00	
Total permanent investments		$139,500.00
Cash	$4,598.86	
Total cash assets		4,598.86
Total assets (as per books of the company)		$144,098.86

LIABILITIES.

Capital stock	$129,500.00
Profit and loss balance	14,598.86
Total liabilities (as per books of the company)	$144,098.86

MILEAGE, TRAFFIC, ETC.*

Average number of persons employed	25 to 30

DESCRIPTION OF ROAD.

Main line of road from base of Mt. Washington to Summit	3.333 miles.
Total road belonging to this company	3.333 "
Total length of track, computed as single track	3.333 "
Same in New Hampshire	3.333 "
Total miles of road operated by this company	3.333 "
Total miles of road operated by this company in New Hampshire	3.333 "
Number of stations on all roads owned by this company	2
Same in New Hampshire	2

EQUIPMENT.

Number of locomotives	6
Number of passenger cars	7
Number of baggage, mail, and express cars	1
Number of freight cars (basis of 8 wheels)	2

*The treasurer has no account of passengers and mileage; no freight carried.

GENERAL INFORMATION.	
Maximum weight of locomotives in working order	12 tons.
Average " " " "	12 "
Maximum weight of tenders full of fuel and water, included in weight of locomotive.	
Maximum weight of passenger cars . . .	3 "
Average " " " . . .	2¾ "
" " mail and baggage cars . .	¼ "
" " 4-wheel box freight cars .	1½ "
" " 4-wheel platform cars . .	1½ "
Length of heaviest engine and tender, from center of forward truck-wheel of engine to center of rear wheel of tender	15 feet.
Total length of heaviest engine and tender over all	18 "
Number of locomotives equipped with train brake . [Kind of brake, Westinghouse.]	All.
Number of cars equipped with train brake . . [Kind of brake, Westinghouse.]	All.

CAPITAL STOCK.		
Capital stock authorized by votes of company	$129,500	
Capital stock issued (number of shares, 1,295); amount paid in		$129,500.00
Total amount paid in (as per books of the company)		129,500.00
Total number of stockholders	36	
Number of stockholders in New Hampshire .	23	
Amount of stock held in New Hampshire	$84,400	

NAMES AND RESIDENCES OF OFFICERS.

Walter Aiken, *President* and *General Manager*, Franklin Falls, N. H.; *Auditors*, Henry Chandler, Manchester, N. H., George A. Fernald, Boston, Mass.; Edward D. Harlow, *Treasurer*, Boston, Mass.; F. E. Brown, *Clerk of Corporation*, Concord, N. H.

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

Walter Aiken, Franklin Falls, N. H.; James T. Furber, George A. Fernald, Boston, Mass.; John H. Pearson, Nathaniel White, Jr., John P. George, Concord, N. H.; Frederick Smyth, Manchester, N. H.

PROPER ADDRESS OF THE COMPANY.

MOUNT WASHINGTON RAILROAD.

President's Office, FRANKLIN FALLS, N. H.

Treasurer's and Transfer Office, BOSTON, MASS.

EDWARD D. HARLOW,
Treasurer.
WALTER AIKEN,
General Manager.

COMMONWEALTH OF MASSACHUSETTS.

SUFFOLK ss. BOSTON, October 24, 1890. Then personally appeared Edward D. Harlow and Walter Aiken, and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

GEORGE N. CARPENTER,
Justice of the Peace.

REPORT

OF THE

PORTLAND & ROCHESTER RAILROAD

FOR THE YEAR ENDING JUNE 30, 1890.

GENERAL EXHIBIT FOR THE YEAR.	
Total income	$221,460.41
Total expense (including taxes)	165,477.47
Net income	55,982.94
Dividends declared (6 per cent)	35,524.22
Balance for the year (surplus)	20,458.72
Balance at commencement of year	84,031.39
Balance June 30, 1890	104,490.11

ANALYSIS OF EARNINGS.		
From local passengers (all passengers starting from or stopping at any station on this road)*		$91,473.79
From through passengers (to and from other roads over and beyond this road)		
From express		2,888.29
From mails		7,256.32
Total earnings from passenger department		101,618.40
From local freight (all freight starting from or stopping at any station on this road) *		117,399.39
From through freight (to and from other roads over and beyond this road)		
Total earnings from freight department		117,399.39
Total transportation earnings		219,017.79
Income from all other sources, viz.:		2,442.62
Rents	$2,442.62	
Total income from all sources		$221,460.41

* Including passengers and freight to and from other roads starting from or stopping at stations on this road.

ANALYSIS OF EXPENSES.

Salaries of general officers	$6,799.98
Legal expenses	509.91
Insurance	826.46
Stationery and printing / Outside agencies and advertising	2,712.28
Contingencies and miscellaneous	6,743.29
Repairs of bridges (including culverts and cattle-guards)	4,415.68
Repairs of buildings	2,258.85
Repairs of fences, road-crossings, signs, and railway gates	2,055.98
Renewal of rails [No. tons steel laid, 50.075.]	1,927.92
Renewal of ties [No. laid, 13,270.]	3,719.66
Repairs of roadbed and track	21,315.50
Docks and wharves	1,132.97
Repairs of locomotives	5,416.43
New locomotives	7,000.00
Fuel for locomotives	19,813.22
Water supply	715.67
Oil and waste	2,088.65
Locomotive service*	13,724.80
Repairs of passenger cars	7,345.99
Passenger-train service*	6,441.41
Passenger-train supplies	296.85
Mileage passenger cars †	86.24
Repairs of freight cars	11,446.33
New freight cars	7,875.00
Freight-train service*	10,274.14
Freight-train supplies	170.93
Telegraph expenses	907.18
Loss and damage, freight	281.53
Loss and damage, property and cattle / Personal injuries	165.00
Agents' and station service*	8,252.89
Station supplies	639.13
Cross tenders, watchmen, and switchmen	5,022.88
Total operating expenses	$162,382.76
Taxes, state	2,295.16
Taxes, local	799.55
Total operating expenses and taxes	$165,477.47

BALANCE-SHEET, JUNE 30, 1890.

ASSETS.

Cost of road	$592,070.45
Lands in Portland	46,341.28

* Salaries and wages. † Debit balances.

Lands in Gorham	$2,286.00	
Lands in Alfred	800.00	
Lands in Westbrook	2,450.00	
Total permanent investments		$643,947.73
Cash	$29,495.08	
Bills receivable	250.00	
Due from agents and companies	2,186.62	
Materials and supplies	17,182.53	
Portland & Rochester Extension	3,498.60	
Total cash assets		52,612.83
Total assets (as per books of the company)		$696,560.56

LIABILITIES.

Capital stock	$592,070.45
Profit and loss balance	104,490.11
Total liabilities (as per books of the company)	$696,560.56

MILEAGE, TRAFFIC, ETC.

Passenger-train mileage		120,212
Freight-train mileage		69,288
Total revenue train mileage		189,500
Switching-train mileage		29,218
Other train mileage		8,630
Total train mileage		227,348
Number of season-ticket passengers*	59,206	
Number of local passengers (including season)		269,364
Number of through passengers (to and from other roads going over and beyond this road)		20,094
Total number of passengers carried		289,458
Local passenger mileage (local passengers carried one mile)		2,718,397
Through passenger mileage (through passengers carried one mile)		596,627
Total passenger mileage		3,315,024
Number tons local freight		62,835
Number tons through freight (to and from other roads going over and beyond this road)		92,135
Total number tons freight carried		154,970
Local freight mileage (tons local freight carried one mile)		1,264,968
Through freight mileage (tons through freight carried one mile)†		4,040,656
Total freight mileage		5,305,624
Average number of persons employed		156

* Reckoning twelve passengers per week for time of each season ticket.
m other roads.

DESCRIPTION OF ROAD.	
Main line of road from Portland, Me., to Rochester, N. H.	52.50 miles.
Main line of road in New Hampshire	3.50 "
Sidings and other tracks not above enumerated	13.82 "
Same in New Hampshire	1.50 "
Total length of track, computed as single track	66.32 "
Same in New Hampshire	5.00 "
Total length of steel rails in tracks, not including steel-top rails	52.50 "
[Weights per yard, 56 lbs.]	
Number of stations in New Hampshire on all roads operated by the company	2
Number of telegraph offices in same	2
Number of stations on all roads owned by this company	17
Same in New Hampshire	2

EQUIPMENT.	
Number of locomotives	9
Number of passenger cars	10
Number of baggage, mail, and express cars	8
Number of freight cars (basis of 8 wheels)	244
Number of other cars	28

GENERAL INFORMATION.	
Maximum weight of locomotives in working order	43 tons.
Average " " " "	33 "
Maximum weight of tenders full of fuel and water	18 "
Average " " " "	14 "
Maximum weight of passenger cars	28½ "
Average " " "	25 "
" " of mail and baggage cars	13 "
" " of 8-wheel box freight cars	9 "
" " of 8-wheel platform cars	7½ "
Length of heaviest engine and tender, from center of forward truck-wheel of engine to center of rear wheel of tender	42½ feet.
Total length of heaviest engine and tender over all	50 "
Number of locomotives equipped with train brake. [Kind of brake, Westinghouse automatic.]	6
Number of cars equipped with train brake [Kind of brake, Westinghouse automatic.]	13
Number of passenger cars with Miller platform and buffer	11

RATES OF FARE, ETC.	
Average rate of fare per mile (not including season tickets) for local passengers on roads operated by this company *	2.975 cents.
Average rate of fare per mile received from passengers to and from other roads	2.723 "
Average rate of fare per mile for season-ticket passengers †	1.067 "
Average rate of fare per mile received from all passengers	2.656 "
Average rate of local freight per ton per mile *	3.641 "
Average rate of freight per ton per mile received from freight to and from other roads	1.588 "
Average rate of freight per ton per mile received from all freight	2.238 "

CAPITAL STOCK.		
Capital stock authorized by charter	$600,000	
Capital stock issued (number of shares, 5,918); amount paid in ‡		$592,070.45
Total number of stockholders	92	
Number of stockholders in New Hampshire	3	
Amount of stock held in New Hampshire,	$1,100	

NAMES AND RESIDENCES OF OFFICERS.

George P. Wescott, *President*, Portland, Me.; Joseph W. Peters, *Superintendent*, *General Freight Agent*, and *General Passenger Agent*, Portland, Me.; William H. Conant, *Treasurer* and *Clerk of Corporation*, Portland, Me.

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

George P. Wescott, Nathan Webb, W. L. Putnam, Charles McCarthy, Jr., I. P. Baxter, Portland, Me.; George C. Lord, Newton, Mass.; Arthur Sewall, Bath, Me.; Stephen J. Young, Brunswick, Me.; Joseph S. Ricker, Deering, Me.

PROPER ADDRESS OF THE COMPANY.

PORTLAND & ROCHESTER RAILROAD,

PORTLAND, ME.

* Rates as per tariff.

† Reckoning twelve passengers per week for time of each season ticket.

‡ Stock, $591,800; scrip, $270.45.

WILLIAM H. CONANT.
Treasurer.
J. W. PETERS,
Superintendent.

STATE OF MAINE.

CUMBERLAND SS. December 30, 1890. Then personally appeared William H. Conant and J. W. Peters, above named, and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

JOHN B. DONOVAN,
Justice of the Peace.

REPORT

OF THE

SULLIVAN COUNTY RAILROAD COMPANY

FOR THE YEAR ENDING JUNE 30, 1890.

GENERAL EXHIBIT FOR THE YEAR.		
Total income		$245,836.77
Total expense (including taxes)		146,220.66
Net income		99,616.11
Rentals:		3,687.56
Central Vermont Railroad Company	$3,600.06	
J. W. Cooley & Co.	87.50	
Interest accrued during year:		12,549.53
On unfunded debt	$12,549.53	
Dividends declared (8 per cent)		40,000.00
Balance for the year (surplus)		43,379.02
Balance at commencement of year	$50,856.87	
Add	39,176.10	
Balance at commencement of year as so changed		90,032.97
Balance June 30, 1890 (surplus)		133,411.99

ANALYSIS OF EARNINGS.	
From local passengers (all passengers starting from or stopping at any station on this road) *	$21,171.39
From through passengers (to and from other roads over and beyond this road)	59,684.17
From express and extra baggage	3,640.00
From mails	8,656.34
Total earnings from passenger department	93,151.90
From local freight (all freight starting from or stopping at any station on this road) *	6,392.16

* Including passengers and freight to and from other roads starting from or stopping at stations on this road.

From through freight (to and from other roads over and beyond this road)		$145,961.88
Total earnings from freight department		152,354.04
Total transportation earnings		245,505.94
Income from all other sources, viz.:		330.83
Rents from real estate	$330.83	
Total income from all sources		$245,836.77

ANALYSIS OF EXPENSES.

Salaries of general officers and clerks	$6,739.51
Legal expenses	492.17
Insurance	233.80
Stationery and printing	1,251.63
Outside agencies and advertising	285.69
Contingencies and miscellaneous	1,655.01
Repairs of bridges (including culverts and cattle-guards)	1,615.06
Repairs of buildings	1,700.42
Repairs of fences, road-crossings, and signs	1,141.35
Renewal of rails	889.79
[No. tons steel laid, $60\frac{1285}{2240}$.]	
Renewal of ties	4,431.29
[No. laid, 10,443.]	
Repairs of roadbed and track	13,384.77
Repairs of locomotives	8,246.73
Fuel for locomotives	25,119.73
[Tons of coal, 6,046.]	
Water supply	439.06
Oil and waste	1,109.60
Locomotive service *	13,936.86
Repairs of passenger cars	82.83
Passenger-train service *	2,578.43
Passenger-train supplies	88.02
Mileage passenger cars†	7,471.32
Repairs of freight cars	5,765.62
Freight-train service *	10,432.12
Freight-train supplies	59.30
Mileage freight cars †	18,390.10
Telegraph expenses	586.14
Agents' and station service *	11,689.11
Station supplies	1,316.80
Total operating expenses	$139,352.68
Taxes, state	6,750.86
Taxes, local	117.12
Total operating expenses and taxes	$146,220.66

 * Salaries and wages. † Debit balances.

PROPERTY ACCOUNTS: CHARGES AND CREDITS DURING THE YEAR.		
Bridging		$65,699.18
Superstructure, including rails		37,967.78
Passenger and freight stations, wood-sheds, and water stations		1,395.03
Total for construction		$105,061.99
Locomotives	$4,917.31	
Total for equipment		4,917.31
Total charges to property accounts		$109,979.30
Net addition to property accounts for the year		109,979.30

BALANCE-SHEET, JUNE 30, 1890.

ASSETS.		
Cost of road and other real estate	$797,951.29	
Cost of equipment	40,224.41	
Total permanent investments		$838,175.70
Due from agents and companies	$1,724.40	
Total cash assets		1,724.40
Total assets (as per books of the company)		$839,900.10

LIABILITIES.		
Capital stock		$500,000.00
Unfunded debt, viz.:		206,488.11
Notes payable	$91,389.15	
Vouchers and accounts	115,098.96	
Profit and loss balance		133,411.99
Total liabilities (as per books of the company)		$839,900.10

MILEAGE, TRAFFIC, ETC.		
Passenger-train mileage		67,590
Freight-train mileage		109,218
Total revenue train mileage		176,808
Switching-train mileage		33,064
Other train mileage		10,242
Total train mileage		220,114
Number of season-ticket passengers *	1,248	
Number of local passengers (including season)		51,682
Number of through passengers (to and from other roads going over and beyond this road)		95,664

* Reckoning twelve passengers per week for time of each season ticket.

Total number of passengers carried	147,346
Local passenger mileage (local passengers carried one mile)	782,112
Through passenger mileage (through passengers carried one mile)	2,152,396
Total passenger mileage	2,934,508
Number tons local freight	8,383
Number tons through freight (to and from other roads going over and beyond this road)	704,760
Total number tons freight carried	713,143
Local freight mileage (tons local freight carried one mile)	158,439
Through freight mileage (tons through freight carried one mile) *	18,158,315
Total freight mileage	18,316,754
Average number of persons employed	112

DESCRIPTION OF ROAD.

Main line of road from Bellows Falls to Windsor, Vt.	26.000 miles.
Main line of road in New Hampshire	25.810 "
Main line of road in Vermont	.190 "
Double track on main line	8.681+ "
Same in New Hampshire	8.681+ "
Total road belonging to this company	26.000 "
Sidings and other tracks not above enumerated	5.439+ "
Same in New Hampshire	5.439+ "
Total length of track, computed as single track	40.12 + "
Same in New Hampshire	39.93 + "
Total length of steel rails in tracks, not including steel-top rails	39.173+ "
[Weights per yard, 56 and 66 lbs.]	
Total miles of road operated by this company	26.000 "
Total miles of road operated by this company in New Hampshire	25.810 "
Number of stations in New Hampshire on all roads operated by this company	6
Number of telegraph offices in same	5
Number of stations on all roads owned by this company	8
Same in New Hampshire	6

EQUIPMENT.

Number of locomotives leased	10

* Carried to and from other roads.

LIST OF ACCIDENTS.

	From causes beyond their own control (in New Hampshire).		From their own misconduct or carelessness (in New Hampshire).		Total in New Hampshire.		Total on whole road operated.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
Passengers.	.....	.....	.....	.....	.....	.....	.....	.....
Employés ..	.....	1	1	.....	1	1	1	1
Others.....	.....	.....	.....	.....	.....	.....	.....	.....

STATEMENT OF EACH ACCIDENT IN NEW HAMPSHIRE.

October 11, 1889. — John Welch, brakeman on construction train, while switching cars at coal bin in North Walpole, had right arm caught between the dead woods of two coal cars, injuring it so that it was amputated.

June 1, 1890. — W. H. Aikens, of Palmer, Mass., was in the employ of this company as freight brakeman, and boarded at Windsor, Vt. For his own amusement he came to Bellows Falls on a hog train, Sunday, and while returning to Windsor on a similar train at night, he was struck and killed by the overhead bridge at Charlestown, he being at the time on a high refrigerator car.

BRIDGES BUILT WITHIN THE YEAR IN NEW HAMPSHIRE.

Location.	Kind.	Material.	Length.	When built.
Windsor, Vt.....	Riveted Lattice.	Iron.	587 ft.	1889.

BRIDGES.	
Number of spans of stone bridges of 25 feet and upwards *	1
Aggregate length of same for single track 26 ft.	

* In New Hampshire, on miles of road owned.

Number of spans of iron bridges of 25 feet and upwards *	8
Aggregate length of same for single track, 1,226 ft.	
Number of spans of timber bridges of 25 feet and upwards *	4
Aggregate length of same for single track, 587 ft.	
Number of crossings of highways at grade *	29
" " " over railroad	2
" " " under railroad	3
Number of highway bridges 18 feet above track	2
Number of crossings at which there are neither signals nor flagmen *	29

RATES OF FARE, ETC.

Average rate of fare per mile (not including season tickets) for local passengers on roads operated by this company †	2.706 cents.
Average rate of fare per mile received from passengers to and from other roads	2.772 "
Average rate of fare per mile for season-ticket passengers ‡	.641 "
Average rate of fare per mile received from all passengers	2.755 "
Average rate of local freight per ton per mile †	4.035 "
Average rate of freight per ton per mile received from freight to and from other roads	.804 "
Average rate of freight per ton per mile received from all freight	.832 "

CAPITAL STOCK.

Capital stock authorized by charter	$500,000	
Capital stock authorized by votes of company	500,000	
Capital stock issued (number of shares, 5,000); amount paid in		$500,000.00
Total amount paid in, as per books of the company		500,000.00
Total number of stockholders	9	

NAMES AND RESIDENCES OF OFFICERS.

A. B. Harris, *President*, Boston, Mass.; W. H. Wilson, *Auditor*, Springfield, Mass.; J. Mulligan, *Superintendent*, Springfield, Mass.; H. E. Howard, *General Freight Agent*, Springfield, Mass.; E. C. Watson, *General Ticket Agent*, Springfield, Mass.; E. F. Lane, *Treasurer*, Keene, N. H.; J. H. Albin, *Clerk of Corporation*, Concord, N. H.

* In New Hampshire, on miles of road owned. † Rates as per tariff.
‡ Reckoning twelve passengers per week for time of each season ticket.

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

A. B. Harris, Boston, Mass.; H. C. Robinson, Hartford, Ct.; Frederick Billings, Woodstock, Vt.; J. H. Williams, Bellows Falls, Vt.; C. J. Amidon, Hinsdale, N. H.; J. H. Albin, N. E. Martin, Concord, N. H.

PROPER ADDRESS OF THE COMPANY.

THE SULLIVAN COUNTY RAILROAD COMPANY,

45 Broadway, New York.

A. B. HARRIS, *President.*
J. H. ALBIN,
NATHANIEL E. MARTIN,
Directors.
E. F. LANE, *Treasurer.*

State of New Hampshire.

Cheshire ss. November 20, 1890. Then personally appeared E. F. Lane, treasurer of the Sullivan County Railroad Company, and made oath to the truth of the foregoing statement by him subscribed, according to his best knowledge and belief.

W. L. MASON,
Notary Public.

State of New York.

County of New York ss. November 17, 1890. Then personally appeared A. B. Harris, president of the Sullivan County Railroad Company, and made oath to the truth of the foregoing statement by him subscribed, according to his best knowledge and belief.

CLINTON M. OSTRANDER,
Notary Public.

REPORT

OF THE

CONNECTICUT RIVER RAILROAD COMPANY

FOR THE YEAR ENDING JUNE 30, 1890.

GENERAL EXHIBIT FOR THE YEAR.		
Total income		$1,158,789.74
Total expense (including taxes)		906,547.51
Net income		252,242.23
Rentals:		20,186.93
Ashuelot R. R. Co.	$12,613.76	
Fitchburg R. R. Co.	564.02	
Boston & Albany R. R. Co.	7,009.15	
Interest accrued during year:		25,655.30
On unfunded debt	25,655.30	
Dividends declared (8 per cent)		206,400.00
Balance at commencement of year	$1,000,000.00	
Add sundry vouchers	55.08	
Balance at commencement of year as so changed		1,000,055.08
Balance June 30, 1890 (surplus)		1,000,055.08

ANALYSIS OF EARNINGS.	
From local passengers (all passengers starting from or stopping at any station on this road) *	$318,546.95
From through passengers (to and from other roads over and beyond this road)	138,680.50
From express	18,500.00
From mails	20,691.68
Total earnings from passenger department	496,419.13
From local freight (all freight starting from or stopping at any station on this road)*	132,380.64

* Including passengers and freight to and from other roads starting from or stopping at stations on this road.

From through freight (to and from other roads over and beyond this road)		$460,582.36
Total earnings from freight department		592,953.00
Total transportation earnings		1,089,372.13
Income from all other sources, viz.:		69,417.61
Rents	$11,209.46	
Rent of equipment	10,366.35	
Interest	27,178.86	
Balance due Ashuelot R. R. Co. February 7, 1890	20,662.94	
Total income from all sources		$1,158,789.74

ANALYSIS OF EXPENSES.

Salaries of general officers and clerks	$32,193.04
Legal expenses	1,348.33
Insurance	1,152.98
Stationery and printing	7,368.47
Outside agencies and advertising	1,629.26
Contingencies and miscellaneous	4,734.67
Repairs of bridges (including culverts and cattle-guards)	71,217.27
Repairs of buildings	42,728.00
Repairs of fences, road-crossings, and signs	4,241.57
Renewal of rails	25,663.69
[No. tons steel laid, 824.]	
Renewal of ties	28,601.73
[No. laid, 65,962.]	
Repairs of roadbed and track	163,514.27
Repairs of locomotives	57,653.54
Fuel for locomotives	72,337.13
[Tons of coal, 16,980; cords of wood, 548.]	
Water supply	1,928.13
Oil and waste	4,916.57
Locomotive service *	48,918.47
Repairs of passenger cars	61,933.92
Passenger-train service *	28,855.93
Passenger-train supplies	779.49
Mileage passenger cars †	15.42
Repairs of freight cars	32,215.43
Freight-train service *	31,172.46
Freight-train supplies	677.50
Mileage freight cars †	4,727.61
Telegraph expenses	510.88
Loss and damage, freight and baggage	589.70
Loss and damage, property and cattle	1,243.83
Personal injuries	4,266.15

* Salaries and wages. † Debit balances.

Agents' and station service*		$98,783.59
Station supplies		4,951.01
Total operating expenses		$831,414.82
Taxes, state		65,881.38
Taxes, local		9,251.31
Total operating expenses and taxes		$906,547.51

PROPERTY ACCOUNTS: CHARGES AND CREDITS DURING THE YEAR.

Grading and masonry		$17,833.14
Bridging		67,048.12
Passenger and freight stations, wood-sheds, and water-stations		8,082.10
Engine-houses, car-sheds, and turn-tables		3,780.27
Machine-shops		4,611.90
Purchase of other roads: Ashuelot R. R. was consolidated with the Connecticut River R. R. on February 7, 1890.		210,000.00
Total for construction		$311,355.53
Locomotives (2)		$12,997.50
Passenger, mail, and baggage cars (6)		26,979.86
Total for equipment		$39,977.36
Total charges to property accounts		351,332.89
Property sold (or reduced in valuation on the books) and credited property accounts during the year:		
From No. 1	$31,373.79	
From No. 2	67,048.12	
From No. 4	40,267.24	
From No. 5	3,780.27	
From No. 6	7,080.06	
From No. 11	32,995.98	
From No. 13	27,269.86	
Total credits to property accounts		209,815.32
Net addition to property accounts for the year		$141,517.57

BALANCE-SHEET, JUNE 30, 1890.

ASSETS.

Cost of road	$3,133,561.43	
Cost of equipment	426,527.66	
Stock of Vermont Valley R. R. Co. of 1871	99,610.00	
Total permanent investments		$3,659,699.09

* Salaries and wages.

Cash	$42,047.38	
Bills receivable	137,203.93	
Due from agents and companies	437,248.10	
Materials and supplies	138,976.81	
Total cash assets		$755,476.22
Total assets (as per books of the company)		$4,415,175.31

LIABILITIES.

Capital stock		$2,580,000.00
Unfunded debt, viz.:		835,120.23
Dividends unpaid	$51,634.00	
Notes payable	627,300.00	
Vouchers and accounts	156,186.23	
Profit and loss balance		1,000,055.08
Total liabilities (as per books of the company)		$4,415,175.31

Present or Contingent Liabilities not included in the Balance-sheet.

Bonds guaranteed by this company, or a lien on its road, viz.:
Interest guaranteed on $80,000 of stock of Vermont Valley R. R. Co. of 1871.

MILEAGE, TRAFFIC, ETC.

Passenger-train mileage		408,275
Freight-train mileage		149,869
Total revenue train mileage		558,144
Switching-train mileage		183,139
Other train mileage		18,480
Total train mileage		759,763
Number of season-ticket passengers *	537,227	
Number of local passengers (including season)		1,661,226
Number of through passengers (to and from other roads going over and beyond this road)		209,508
Total number of passengers carried		1,870,734
Local passenger mileage (local passengers carried one mile)		13,930,766
Through passenger mileage (through passengers carried one mile)		5,165,797
Total passenger mileage		19,096,563
Number tons local freight		188,246
Number tons through freight (to and from other roads going over and beyond this road)		675,134
Total number tons freight carried		863,380

* Reckoning twelve passengers per week for time of each season ticket.

Local freight mileage (tons local freight carried one mile)	3,117,563
Through freight mileage (tons through freight carried one mile) *	18,464,251
Total freight mileage	21,581,814
Average number of persons employed	687

DESCRIPTION OF ROAD.

Main line of road from Springfield, Mass., to Keene, N. H.	74.0000 miles.
Main line of road in New Hampshire	23.2142 "
" " in Massachusetts	50.0757 "
" " in Vermont	.7100 "
Double track on main line	36.0000 "
Branches owned by the company, viz.:	
Chicopee to Chicopee Falls, Mass. (single track)	2.3500 "
Mount Tom to Easthampton, Mass. (single track)	3.5000 "
Total length of branches owned by company	5.8500 "
Total length of branches owned by company in Massachusetts	5.8500 "
Total road belonging to this company	79.8500 "
Sidings and other tracks not above enumerated	51.4333 "
Same in New Hampshire	5.4826 "
Total length of track, computed as single track	167.2833 "
Same in New Hampshire	28.6968 "
Total length of steel rails in tracks, not including steel-top rails	157.0300 "
[Weight per yard, 56, 66, and 72 lbs.]	

Roads and Branches belonging to other Companies, operated by this Company under lease or contract.

Ashuelot R. R. was consolidated with the Connecticut River R. R. on February 7, 1890.	
Total miles of road operated by this company	79.8500 miles.
Total miles of road operated by this company in New Hampshire	23.2142 "
Number of stations in New Hampshire on all roads operated by this company	6
Number of stations on all roads owned by this company	26
Same in New Hampshire	6

EQUIPMENT.

Number of locomotives, including 10 leased to Sullivan R. R., under contract of sale	42
Number of passenger cars	61

* Carried to and from other roads.

Number of baggage, mail, and express cars . .	3
Number of freight cars (basis of 8 wheels) . .	552
Number of other cars	50

GENERAL INFORMATION.

Maximum weight of locomotives in working order	85,350 lbs.
Average " " " "	64,429 "
Maximum weight of passenger cars . . .	51,400 "
Average " " " . . .	42,956 "
" " 8-wheel box freight cars . .	44,443 "
" " 4-wheel " " .	21,000 "
" " 8-wheel platform cars . .	17,000 "
Number of locomotives equipped with train brake . [Kind of brake, Westinghouse.]	16
Number of cars equipped with train brake . . [Kind of brake, Westinghouse.]	64
Number of passenger cars with Miller platform and buffer	64
Charges at the rate of one fourth of fourth-class rate for the transportation of company's supplies are included in earnings as reported for this road.	

BRIDGES.

Number of spans of stone bridges of 25 feet and upwards *	3
Aggregate length of same for single track 150 ft.	
Number of spans of iron bridges of 25 feet and upwards *	37
Aggregate length of same for single track, 1,306 ft.	
" " " double track, 3,133 ft.	
Number of spans of timber bridges of 25 feet and upwards *	2
Aggregate length of same for double track 42 ft.	
Number of crossings of highways at grade * . .	49
" " " over railroad .	6
" " " under railroad .	6
Number of highway bridges 18 feet above track .	6
Number of crossings at which gates or flagmen are maintained	5
Number of crossings at which electric signals are maintained *	7
Number of crossings at which there are neither signals nor flagmen *	37
Number of railroad crossings over other railroads :* Holyoke. Deerfield. Cheapside.	3

* In New Hampshire, on miles of road owned.

RATES OF FARE, ETC.	
Average rate of fare per mile (not including season tickets) for local passengers on roads operated by this company *	2.28 cents
Average rate of fare per mile received from passengers to and from other roads	2.68 "
Average rate of fare per mile for season-ticket passengers †	.95 "
Average rate of fare per mile received from all passengers	2.40 "
Average rate of local freight per ton per mile *	4.24 "
Average rate of freight per ton per mile received from freight to and from other roads	2.49 "
Average rate of freight per ton per mile received from all freight	2.75 "

CAPITAL STOCK.		
Capital stock authorized by charter	$2,670,000	
Capital stock authorized by votes of company	2,580,000	
Capital stock issued (number of shares, 25,800); amount paid in		$2,580,000.00
Total amount paid in (as per books of the company)		2,580,000.00
Total number of stockholders	989	

NAMES AND RESIDENCES OF OFFICERS.

W. A. Leonard, *President*, Springfield, Mass.; W. H. Wilson, *Auditor*, Springfield, Mass.; J. Mulligan, *Superintendent*, Springfield, Mass.; H. E. Howard, *General Freight Agent*, Springfield, Mass.; F. C. Watson, *General Ticket Agent*, Springfield, Mass.; Seth Hunt, *Treasurer* and *Clerk of Corporation*, Springfield, Mass.

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

W. A. Leonard, Frederick H. Harris, Springfield, Mass.; A. B. Harris, Boston, Mass.; Oscar Edwards, Northampton, Mass.; Frederick Billings, Woodstock, Vt.; Charles S. Sargent, Brookline, Mass.; William R. Cone, ‡ Hartford, Conn.; A. T. Perkins, Barnstable, Mass.; William Whitney, Holyoke, Mass.; E. F. Lane, Keene, N. H.

* Rates as per tariff.

† Reckoning twelve passengers per week for time of each season ticket.

‡ Died January 10, 1890.

PROPER ADDRESS OF THE COMPANY.

CONNECTICUT RIVER RAILROAD COMPANY,

SPRINGFIELD, HAMPDEN CO., MASS.

OSCAR EDWARDS,
F. H. HARRIS,
E. F. LANE,
A. B. HARRIS,
Directors.
SETH HUNT,
Treasurer.
J. MULLIGAN,
Superintendent.

COMMONWEALTH OF MASSACHUSETTS.

HAMPDEN SS. SPRINGFIELD, January 8, 1891. Then personally appeared Oscar Edwards, F. H. Harris, E. F. Lane, A. B. Harris, Seth Hunt, and J. Mulligan, and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

GEORGE E. FRINK,
Justice of the Peace.

STREET RAILWAY REPORTS.

REPORT

OF THE

CONCORD STREET RAILWAY COMPANY

FOR THE YEAR ENDING DECEMBER 31, 1889.

CAPITAL STOCK AND DEBT.

CAPITAL STOCK.

Capital stock authorized by charter	$50,000	
Capital stock authorized by votes of company	50,000	
Capital stock paid (par value of shares, $100)		$50,000.00
Number of stockholders	61	

DEBT.

Unfunded debt, as follows:		$2,400.00
Notes payable	$2,400.00	
Total gross debt		2,400.00
Amount of cash assets, viz.:		7,131.78
Cash	$4,189.53	
Supplies	577.25	
Debit balances	2,365.00	

PERMANENT INVESTMENTS.

RAILWAY.

Grading and paving Track, including timber, rails, etc., and laying Interest during construction, commissions, discounts, etc. Engineering, agencies, salaries, and other expenses during construction	$32,165.49
Total cost of construction	$32,165.49

EQUIPMENT.		
Horses		$1,520.00
Cars		8,800.00
Other articles of equipment		5,131.69
Total cost of equipment		$15,451.69
LAND AND BUILDINGS.		
Land and buildings owned by company needed in operating road		$6,100.00
Total amount of permanent investments		$53,717.18
Cash assets		7,131.78
Total property and assets of company		$60,848.96
PROPERTY ACCOUNTS: CHARGES AND CREDITS DURING THE YEAR.		
New cars and other equipment		$474.49
Land and buildings		1,701.59
Total addition to property		$2,176.08
Property sold or reduced in valuation on the books, viz.:		8,947.43
Land and buildings	$3,776.59	
Equipment	5,170.84	
REVENUE FOR THE YEAR.		
Received from passengers on railways operated by this company		$22,479.53
Received from express		50.10
Total earnings		$22,529.63
Income from other sources:		159.26
Rent	$55.09	
Miscellaneous	104.17	
Total income from all sources		$22,688.89
EXPENSES OF OPERATING THE RAILWAY FOR THE YEAR.		
Repairs of roadbed and track		$1,971.90
Repairs of cars and other vehicles, harness, and horseshoeing; Repairs on buildings and sundry expenses		3,215.82

Wages and salaries of president, treasurer, and superintendent		$925.00
Wages and salaries of all other persons employed in operating the road		7,030.86
Provender and coal		3,588.51
Insurance		221.00
Total expenses of operating		$16,953.09

NET INCOME, DIVIDENDS, ETC.

Total net income above operating expenses		$5,735.80
Interest paid during the year		357.08
Dividends paid (6 per cent for the year)		3,000.00
Balance for the year or surplus		2,378.72
Surplus at commencement of year	$10,134.78	
Deduct	1,685.82	
Total surplus December 31, 1889		8,448.96

INVENTORY OF EQUIPMENT DECEMBER 31, 1889.

Box-cars	5
Open cars	7
Horses	15
Harnesses (pairs of)	10
Omnibuses	1
Sleighs	1
Other articles of equipment:	
Steam motors	2
Snow-plows for horses	1
Snow-plows for steam	1
Carts, wagons, and sleds	5
Largest number of horses owned at any time during the year	17
Smallest number of horses owned at any time during the year	15
Average number of horses owned during the year	16

GENERAL BALANCE-SHEET, DEC. 31, 1889.

ASSETS.

Construction	$32,165.49
Equipment	15,451.69
Land and buildings	6,100.00
Cash and cash assets	7,131.78
Total assets	$60,848.96

LIABILITIES.

Capital stock	$50,000.00
Unfunded debt	2,400.00
Surplus	8,448.96
Total liabilities	$60,848.96

COPY OF PROFIT AND LOSS ACCOUNT FOR THE YEAR ENDING DEC. 31, 1889.

DR.

To expenses	$16,953.09
interest	357.08
dividends	3,000.00
profit and loss account	4,064.54
balance carried forward January 1, 1890	8,448.96
	$32,823.67

CR.

By balance January 1, 1889	$10,134.78
total income	22,688.89
	$32,823.67

DESCRIPTION OF RAILWAY.

Length of railway owned by company, measured as a single track, exclusive of sidings	7.00 miles.
Aggregate length of switches, sidings, etc.	.75 "
Total length of track, measured as single track	7.75 "
Total length of track paved	2.00 "
Weight of rail per yard, and description of rail: Steel T rail, 25 and 30 lbs.; Iron flat rail, 34 lbs.	

MILES RUN, ETC.

Total number of miles run during the year	103,246
Total number of passengers carried in the cars	293,248
Total number of round trips for the year	14,608
Number of persons regularly employed by company	14
Rates of fare: 6 cents, or 5 tickets for 25 cents; 10 cents, or 3 for 25 cents; 17 cents, or 4 for 60 cents.	

STATEMENT OF EACH ACCIDENT.

On the afternoon of September 20, a car drawn by a steam motor was overturned while ascending the hill at West Concord, the steepest grade on the road. The accident seems to have been caused by the breaking of the casting which supported one of the boxes. There were fifteen passengers in the car at the time; one passenger, a lady, was somewhat injured.

PROPER ADDRESS OF THE COMPANY.

CONCORD HORSE RAILROAD,

CONCORD, N. H.

NAMES OF OFFICERS.

Moses Humphrey, *President* and *Superintendent;* Edgar C. Hoague, *Treasurer;* Nathaniel E. Martin, *Clerk of Corporation.*

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

Moses Humphrey, Howard A. Dodge, George A. Cummings, John H. Albin, Concord, N. H.; Paul R. Holden, West Concord, N. H.; Dexter Richards, Newport, N. H.; George W. Abbott, Penacook, N. H.

MOSES HUMPHREY,
President.
DEXTER RICHARDS,
HOWARD A. DODGE,
GEO. A. CUMMINGS,
PAUL R. HOLDEN,
GEO. W. ABBOTT,
Directors.
E. C. HOAGUE,
Treasurer.
MOSES HUMPHREY,
Superintendent.

STATE OF NEW HAMPSHIRE.

MERRIMACK SS. February 7, 1890. Then personally appeared Moses Humphrey, Dexter Richards, Howard A. Dodge, George A. Cummings, Paul R. Holden, George W. Abbott, and E. C. Hoague, and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

NATHANIEL S. MARTIN,

Justice of the Peace.

REPORT

OF THE

MANCHESTER STREET RAILWAY COMPANY

FOR THE YEAR ENDING SEPTEMBER 30, 1889.

CAPITAL STOCK AND DEBT.

CAPITAL STOCK.

Capital stock authorized by charter	$100,000	
Capital stock authorized by votes of company	25,000	
Capital stock paid (par value of shares, $100)		$25,000.00
Number of stockholders	14	

DEBT.

Notes to Merrimack River Sav. Bank	$22,500.00	
Deficiency	184.03	
Total gross debt		$22,684.03
Amount of cash assets, viz.:		80.79
Depreciation account	$80.79	
Net debt		$22,603.24

PERMANENT INVESTMENTS.

RAILWAY.

Total cost of construction, equipment, land, buildings, and other property not charged to expenses.	$47,500.00

EQUIPMENT.

Horses	109
Cars	25

PROPERTY ACCOUNTS: CHARGES AND CREDITS DURING THE YEAR.		
New horses		3

REVENUE FOR THE YEAR.		
Received from passengers on railways operated by this company		$43,734.87
Received from sales of manure		742.50
Total earnings		$44,477.37
Income from other sources:		2,395.77
Rents	$82.75	
Horses and material sold	2,313.02	
Total income from all sources		$46,873.14

EXPENSES OF OPERATING THE RAILWAY FOR THE YEAR.	
Repairs of roadbed and track	$404.16
Repairs of cars and other vehicles, harness, and horseshoeing	5,678.29
Repairs on buildings	701.26
Renewal of horses	1,521.40
Wages and salaries of president, treasurer, and officers and their clerks	739.71
Wages and salaries of all other persons employed in operating the road	18,135.87
Provender	15,175.29
Taxes, state and local	14.90
Rent	20.00
Interest paid on debt	1,065.00
Water, gas, fuel, etc.	385.58
Insurance	307.36
Damages for injuries to persons and property	2,169.56
Office expenses, and all other expenses not included above	3,293.08
Total expenses of operating	$49,611.46

INVENTORY OF EQUIPMENT.	
Box-cars	13
Open cars	12
Horses	109
Harnesses (pairs of)	19
Other articles of equipment:	
Sleds	3
Snow-plows	1

Largest number of horses owned at any time during the year	131
Smallest number of horses owned at any time during the year	108
Average number of horses owned during the year	119

GENERAL BALANCE-SHEET, SEPT. 30, 1889.

ASSETS.

Construction, Equipment, Land and buildings, Other property	$47,500.00
Cash and cash assets	80.79
Profit and loss	103.24
Total assets	$47,684.03

LIABILITIES.

Capital stock	$25,000.00
Unfunded debt	22,500.00
Surplus	184.03
Total liabilities	$47,684.03

DESCRIPTION OF RAILWAY.

Length of railway owned by company, measured as single track, exclusive of sidings	9.00 miles.
Aggregate length of switches, sidings, etc.	.04 "
Total length of track, measured as single track	9.04 "
Total length of track paved	8.75 "
[Weight of rail per yard, 27 and 34 lbs.]	
Total length of railway, measured as single track, not including sidings, etc., operated by this company	9.00 "

MILES RUN, ETC.

Total number of miles run during the year	260,995
Total number of passengers carried in cars	888,990
Total number of round trips for the year	89,145
Number of persons regularly employed by the company	28
Rates of fare	5 cents.

PROPER ADDRESS OF THE COMPANY.

MANCHESTER STREET RAILWAY,

MANCHESTER, N. H.

NAMES AND RESIDENCES OF OFFICERS.

Charles Williams, *President*, Manchester, N. H.; G. H. Knowles, *Superintendent*, Manchester, N. H.; Charles H. Bartlett, *Treasurer*, Manchester, N. H.; E. F. Jones, *Clerk of Corporation*, Manchester, N. H.

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

Charles Williams, James F. Briggs, A. P. Olzendam, Charles H. Bartlett, J. L. Stevens, Manchester, N. H.

CHARLES WILLIAMS,
A. P. OLZENDAM,
C. H. BARTLETT,
J. F. BRIGGS,
J. L. STEVENS,
Directors.

C. H. BARTLETT,
Treasurer.

N. H. WALKER,
Superintendent.

STATE OF NEW HAMPSHIRE.

HILLSBOROUGH SS. January 24, 1891. Then personally appeared Charles Williams, A. P. Olzendam, C. H. Bartlett, J. F. Briggs, J. L. Stevens, and N. H. Walker, and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

CHARLES E. COCHRAN,
Justice of the Peace.

REPORT

OF THE

NASHUA STREET RAILWAY COMPANY

FOR THE NINE MONTHS ENDING JUNE 30, 1889.

CAPITAL STOCK AND DEBT.

CAPITAL STOCK.

Capital stock authorized by votes of company	$50,000	
Capital stock paid (par value of shares, $50)		$20,000.00
Number of stockholders	30	

DEBT.

Unfunded debt		$28,779.09
Total gross debt		28,779.09
Amount of cash assets, viz.:		814.90
Cash	$99.90	
Supplies	715.00	
Net debt		$27,964.19

PERMANENT INVESTMENTS.

RAILWAY.

Total cost of construction	$23,944.81

EQUIPMENT.

Horses	$7,310.00
Cars	10,020.42
Other articles of equipment	508.69
Total cost of equipment	$17,839.11

LAND AND BUILDINGS.		
Land owned by company needed in operating road		$1,000.00
Buildings owned by company needed in operating road		10,531.49
Total cost of land and buildings		$11,531.49
Total amount of permanent investments		23,944.81
Cash assets		814.90
Total property and assets of company		$54,130.31
PROPERTY ACCOUNTS: CHARGES AND CREDITS DURING THE NINE MONTHS.		
New horses (3)		$375.00
New cars (2)		2,704.08
Other equipment, 1 snow-plow and harnesses		237.25
Land and buildings		4,651.45
Total addition to property		$7,967.78
Property sold or reduced in valuation on the books:		75.00
Horse (1)	$75.00	
Net addition to property		$7,892.78
REVENUE FOR THE NINE MONTHS.		
Received from passengers on railways operated by this company		$12,692.35
Received from sales of manure		262.50
Income from other sources		207.88
Total income from all sources		$13,162.73
EXPENSES OF OPERATING THE RAILWAY FOR THE NINE MONTHS.		
Repairs of cars and other vehicles, harness, and horseshoeing		$808.40
Repairs on buildings		44.70
Renewal of horses		75.00
Wages and salaries of president, treasurer, superintendent, and their clerks		976.07
Wages and salaries of all other persons employed in operating the road		5,234.27
Provender		3,102.72
Gas, fuel, etc.		224.79
Insurance		48.15
Damages for injuries to persons and property		225.00

Office expenses, and all other expenses not included above		$778.82
Total expenses of operating		$11,517.92

NET INCOME, DIVIDENDS, ETC.

Total net income above operating expenses		$1,644.81
Interest accrued during the nine months		1,007.36
Balance for the nine months, or surplus		637.45
Surplus at commencement of nine months	$4,713.77	
Add	637.45	
Total surplus June 30, 1889		5,351.22

INVENTORY OF EQUIPMENT.

Box-cars	7
Open cars	7
Horses	52
Harnesses (pairs of)	22
Other articles of equipment:	
Snow-plow	1
Snow-sweeper	1
Sled	1
Buggy	1
Wagon	1
Carts	2
Largest number of horses owned at any time during the nine months	53
Smallest number of horses owned at any time during the nine months	49
Average number of horses owned during the nine months	51

GENERAL BALANCE-SHEET, JUNE 30, 1889.

ASSETS.

Construction	$23,944.81
Equipment	17,839.11
Land and buildings	11,531.49
Cash and cash assets	814.90
Total assets	$54,130.31

LIABILITIES.

Capital stock	$20,000.00
Funded debt	28,779.09
Surplus	5,351.22
Total liabilities	$54,130.31

COPY OF PROFIT AND LOSS ACCOUNT, JUNE 30, 1889.

DR.

To expenses	$11,517.92
interest	1,007.36
balance carried forward June 30, 1889	5,351.22
	$17,876.50

CR.

By balance	$4,713.77
total income	13,162.73
	$17,876.50

DESCRIPTION OF RAILWAY.

Length of railway owned by company, measured as a single track, exclusive of sidings	20,789 feet.
Aggregate length of switches, sidings, etc.	2,088 "
Total length of track, measured as single track	22,877 "
Total length of track paved	3¾ miles.
[Weight of rail per yard, 35 lbs.]	
Description of the several lines or routes operated by the company:	
Main Line, — Kinsley, Main, and Canal streets to Concord depot.	
Main street, — From junction Kinsley and Main to Lawndale Garden.	
West Pearl street, — From Tremont House to stable on Kinsley street.	
Cost per horse for feeding, bedding, and shoeing per day	$0.26¼
Total length of railway, measured as single track, not including sidings, etc., operated by this company.	22,887 feet.

MILES RUN, ETC.

Total number of miles run	86,992
Total number of passengers carried in the cars	254,243
Total number of round trips	21,748
Number of persons regularly employed by company	14
Rates of fare	4, 4½, 5 cents.

PROPER ADDRESS OF THE COMPANY.

NASHUA STREET RAILWAY,

NASHUA, N. H.

Superintendent's Office, 85 KINSLEY STREET.

Treasurer's Office, 69 MAIN STREET.

NAMES AND RESIDENCES OF OFFICERS.

George H. Knowles, *President*, Boston, Mass.; George E. Mudgett, *Superintendent*, Nashua, N. H.; John D. Chandler, *Treasurer* and *Clerk of Corporation*, Nashua, N. H.

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

George H. Knowles, Boston, Mass.; John A. Fisher, William H. Knowles, John D. Chandler, Nashua, N. H.; Charles Williams, Manchester, N. H

GEORGE H. KNOWLES,
JOHN A. FISHER,
WILLIAM H. KNOWLES,
Directors.
JOHN D. CHANDLER,
Treasurer.

STATE OF NEW HAMPSHIRE.

HILLSBOROUGH SS. December 1, 1890. Then personally appeared George H. Knowles, John A. Fisher, William H. Knowles, and John D. Chandler, and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

GEORGE R. PIERCE,
Notary Public.

REPORT

OF THE

LACONIA & LAKE VILLAGE STREET RAILWAY COMPANY

FOR THE YEAR ENDING DECEMBER 31, 1889.

CAPITAL STOCK AND DEBT.		
CAPITAL STOCK.		
Capital stock authorized by charter	$30,000	
Capital stock authorized by votes of company	20,000	
Capital stock paid (par value of shares, $50)		$20,000.00
Number of stockholders	39	
DEBT.		
Unfunded debt, as follows:		$7,375.10
Notes payable	$6,700.00	
Accounts payable	675.10	
Total gross debt		$27,375.10
Amount of cash assets, viz.:		1,878.05
Cash	$1,486.05	
Supplies	392.00	
Net debt		$25,497.05

PERMANENT INVESTMENTS.	
RAILWAY.	
Grading and paving; Track, including timber, rails, etc., and laying; Interest during construction, commissions, discounts, etc.	$10,732.67
Engineering, agencies, salaries, and other expenses during construction	240.00
Total cost of construction	$10,972.67

EQUIPMENT.		
Horses		$3,515.00
Cars		5,976.00
Other articles of equipment		2,581.00
Total cost of equipment		$12,072.00
LAND AND BUILDINGS.		
Total cost of land and buildings		$8,596.27
Total amount of permanent investments		$31,640.94
Cash assets		1,878.05
Total property and assets of company		$33,518.99
PROPERTY ACCOUNTS: CHARGES AND CREDITS DURING THE YEAR.		
Extension of track (paving)		$289.10
New horses (4)		607.50
Other equipment		11.00
Land and buildings		25.31
Total addition to property		$932.91
Property sold or reduced in valuation on the books:		310.00
Horses (4)	$310.00	
Net addition to property for the year		$622.91
REVENUE FOR THE YEAR.		
Received from passengers on railways operated by this company		$8,548.71
Received from sales of manure		85.50
Total earnings		$8,634.21
Income from other sources:		482.30
Advertising	$75.00	
Barge earnings	139.92	
Rents	186.32	
Pigs	78.81	
Baiting horses, etc.	2.25	
Total income from all sources		$9,116.51
EXPENSES OF OPERATING THE RAILWAY FOR THE YEAR.		
Repairs of roadbed and track		$249.75
Repairs of cars and other vehicles, harness, and horseshoeing		641.73

Repairs on buildings	$79.83
Renewal of horses	80.00
Wages and salaries of president, treasurer, superintendent, and their clerks	125.00
Wages and salaries of all other persons employed in operating the road	3,011.46
Provender	1,670.25
Insurance	196.17
Office expenses, and all other expenses not included above	501.64
Total expenses of operating	$6,555.83

NET INCOME, DIVIDENDS, ETC.

Total net income above operating expenses	$2,560.68
Interest accrued during the year	394.00
Dividends declared (5 per cent for the year)	1,000.00
Balance for the year, or surplus	1,166.68
Surplus at commencement of year	4,977.21
Total surplus December 31, 1889	6,143.89

INVENTORY OF EQUIPMENT.

Box-cars	4
Open cars	4
Horses	20
Barges	2
Sleighs	6
Other articles of equipment: Wagon, tip-cart, platform car, and plow.	
Largest number of horses owned at any time during the year	20
Smallest number of horses owned at any time during the year	18
Average number of horses owned during the year	20

GENERAL BALANCE-SHEET, DEC. 31, 1889.

ASSETS.

Construction	$10,972.67
Equipment	12,072.00
Land and buildings	8,596.27
Cash and cash assets	1,878.05
Total assets	$33,518.99

LIABILITIES.

Capital stock	$20,000.00
Unfunded debt	7,375.10
Surplus	6,143.89
Total liabilities	$33,518.99

COPY OF PROFIT AND LOSS ACCOUNT FOR THE YEAR ENDING DEC. 31, 1889.

DR.

To expenses	$6,555.83
interest	394.00
dividends	1,000.00
balance carried forward January 1, 1890	6,143.89
	$14,093.72

CR.

By balance January 1, 1889	$4,977.21
total income	9,116.51
	$14,093.72

DESCRIPTION OF RAILWAY.

Length of railway owned by company, measured as a single track, exclusive of sidings	2.136 miles.
Aggregate length of switches, sidings, etc.	.169 "
Total length of track, measured as single track	2.305 "
Total length of track paved	.520 "
Weight of rail per yard, and description of rail: Street, 34 lbs.; T, 25 lbs.	
Total length of railway, measured as single track, not including sidings, etc., operated by this company	2.136 "

MILES RUN, ETC.

Total number of miles run during the year	47,587
Total number of passengers carried in the cars	168,047
Total number of round trips for the year	10,575
Number of persons regularly employed by company	5
Rates of fare	4, 5, 6 cents.

PROPER ADDRESS OF THE COMPANY.

LACONIA AND LAKE VILLAGE HORSE RAILROAD,

LACONIA, N. H.

NAMES OF OFFICERS.

A. G. Folsom, *President;* B. S. Keniston, *Manager;* Edmund Little, *Treasurer* and *Clerk of Corporation.*

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

A. G. Folsom, C. A. Busiel, J. C. Hutchinson, S. B. Smith, E. C. Lewis, D. A. Tilton, Laconia, N. H.; S. C. Clark, Lake Village, N. H.

A. G. FOLSOM,
C. A. BUSIEL,
S. C. CLARK,
S. B. SMITH,
GARDNER COOK,
J. GILBERT,
Directors.
EDMUND LITTLE,
Treasurer.
B. S. KENISTON,
Superintendent.

STATE OF NEW HAMPSHIRE.

BELKNAP SS. January, 1890. Then personally appeared A. G. Folsom, president, Edmund Little, treasurer, and B. S. Keniston, superintendent, and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

GEORGE B. LANE,
Justice of the Peace.

REPORT

OF THE

MANCHESTER STREET RAILWAY COMPANY

FOR THE NINE MONTHS ENDING JUNE 30, 1890.

CAPITAL STOCK AND DEBT.

CAPITAL STOCK.

Capital stock authorized by charter	$100,000	
Capital stock authorized by votes of company	25,000	
Capital stock paid (par value of shares, $100)		$25,000.00
Number of stockholders	17	

DEBT.

Notes bearing interest	$42,730.58	
Total gross debt		$42,730.58
Amount of cash assets, viz.:		332.05
Cash	$251.26	
Depreciation account	80.79	
Net debt		$42,398.53

PERMANENT INVESTMENTS.

RAILWAY.

Total cost of construction, equipment, land, buildings, and other property not charged to expense account	$47,500.00

EQUIPMENT.

Horses	136
Cars	25

PROPERTY ACCOUNTS: CHARGES AND CREDITS DURING THE NINE MONTHS.		
New horses		27
REVENUE FOR THE NINE MONTHS.		
Received from passengers on railways operated by this company		$34,970.50
Received from sales of manure		100.75
Total earnings		$35,071.25
Income from other sources, viz.:		2,068.75
Rents	$10.00	
Horses and materials sold	1,993.03	
G. H. Knowles, $53.32; G. W. Riddle, $3; error, $9.40	65.72	
Total income from all sources		$37,140.00
EXPENSES OF OPERATING THE RAILWAY FOR THE NINE MONTHS.		
Repairs of roadbed and track		$1,194.17
Repairs of cars and other vehicles, harness, and horseshoeing		6,097.82
Repairs on buildings		1,198.03
Renewal of horses		4,420.94
Wages and salaries of persons employed in operating the road		20,029.03
Provender		10,387.13
Rent		298.45
Interest		1,500.00
Water, gas, and fuel		482.30
Insurance		387.73
Damages for injuries to persons and property		150.00
Office expenses, and all other expenses not included above		3,059.11
Total operating expenses		$49,204.71
INVENTORY OF EQUIPMENT.		
Box-cars		13
Open cars		12
Horses		136
Harnesses (pairs of)		34
Other articles of equipment: Four snow-plows, one wagon, and snow-sleds.		

Largest number of horses owned at any time during the nine months	141
Smallest number of horses owned at any time during the nine months	108
Average number of horses owned during the nine months	124

GENERAL BALANCE-SHEET, JUNE 30, 1890.

ASSETS.

Construction	$47,500.00
Cash and cash assets	332.05
Profit and loss	19,898.53
Total assets	$67,730.58

LIABILITIES.

Capital stock	$25,000.00
Unfunded debt	42,730.58
Total liabilities	$67,730.58

DESCRIPTION OF RAILWAY.

Length of railway owned by company, measured as a single track, exclusive of sidings	9.00 miles.
Aggregate length of switches, sidings, etc.	.04 "
Total length of track, measured as single track	9.04 "
Total length of track paved	8.75 "
[Weight of rail per yard, 27 and 34 lbs.]	
Total length of railway, measured as single track, not including sidings, etc., operated by this company	9.00 "

MILES RUN, ETC.

Total number of passengers carried in the cars	701,232
Rates of fare	5 cents.

STATEMENT OF EACH ACCIDENT.

No accident of importance.

January 1, 1890. — Emma Peacor and Eliza Lancaster were slightly injured by being run against by a pair of horses which got away from their driver while being shifted from one end of the car to the other.

May 30. — A Mr. Ordway fell from an overcrowded car and received slight bruises.

PROPER ADDRESS OF THE COMPANY.

MANCHESTER STREET RAILWAY,

MANCHESTER, N. H.

NAMES AND RESIDENCES OF OFFICERS.

Charles Williams, *President*, Manchester, N. H.; G. H. Knowles, *Superintendent*, Manchester, N. H.; C. H. Bartlett, *Treasurer*, Manchester, N. H.; Edwin F. Jones, *Clerk of Corporation*, Manchester, N. H.

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

Charles Williams, James F. Briggs, Charles H. Bartlett, A. P. Olzendam, J. L. Stevens, Manchester, N. H.

CHARLES WILLIAMS,
A. P. OLZENDAM,
J. F. BRIGGS,
C. H. BARTLETT,
J. L. STEVENS,
Directors.
C. H. BARTLETT,
Treasurer.
N. H. WALKER,
Superintendent.

STATE OF NEW HAMPSHIRE.

HILLSBOROUGH SS. January 24, 1891. Then personally appeared Charles Williams, A. P. Olzendam, J. F. Briggs, C. H. Bartlett, J. L. Stevens, and N. H. Walker, and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

CHARLES E. COCHRAN,
Justice of the Peace.

REPORT

OF THE

NASHUA STREET RAILWAY COMPANY

FOR THE YEAR ENDING JUNE 30, 1890.

CAPITAL STOCK AND DEBT.

CAPITAL STOCK.

Capital stock authorized by charter	$50,000	
Capital stock authorized by votes of company	20,000	
Capital stock paid (par value of shares, $50)		$20,000.00

DEBT.

Unfunded debt		$45,613.72
Amount of cash assets, viz.:		1,503.55
Cash	$378.55	
Supplies	1,125.00	
Net debt		$44,110.17

PERMANENT INVESTMENTS.

RAILWAY.

Total cost of construction	$28,520.68

EQUIPMENT.

Horses	$10,178.35
Cars	15,624.93
Other articles of equipment	614.44
Total cost of equipment	$26,417.72

LAND AND BUILDINGS.	
Land owned by company needed in operating road	$1,000.00
Buildings owned by company needed in operating road	14,179.25
Total cost of land and buildings	$15,179.25
Total amount of permanent investments	28,520.68
Cash assets	1,503.55
Total property and assets of company	$71,621.20

PROPERTY ACCOUNTS: CHARGES AND CREDITS DURING THE YEAR.		
Extension of tracks		$4,575.87
New horses		3,043.35
New cars		5,604.51
Other equipment (new harnesses)		105.75
Land and buildings		3,647.76
Total addition to property		$16,977.24
Property sold or reduced in valuation on the books:		175.00
Horses sold	$175.00	
Net addition to property for the year		$16,802.24

REVENUE FOR THE YEAR.	
Received from passengers on railways operated by this company	$21,749.15
Received from sales of manure	322.02
Income from other sources	708.10
Total income from all sources	$22,779.27

EXPENSES OF OPERATING THE RAILWAY FOR THE YEAR.	
Repairs of roadbed and track	$69.07
Repairs of cars and other vehicles, harness, and horseshoeing	1,487.77
Repairs on buildings	84.20
Renewal of horses	175.00
Wages and salaries of president, treasurer, superintendent, and their clerks	2,618.80
Wages and salaries of all other persons employed in operating the road	8,925.31
Provender	4,595.96
Gas, coal, etc.	408.25

Insurance		$336.31
Office expenses, and all other expenses not included above		1,510.98
Total expenses of operating		$20,209.65

NET INCOME, DIVIDENDS, ETC.

Total net income above operating expenses		$2,569.62
Interest accrued during the year		1,313.36
Dividends declared (3 per cent for the year)		600.00
Balance for the year, or surplus		656.26
Surplus at commencement of year	$5,351.22	
Add	656.26	
Total surplus June 30, 1890		$6,007.48

INVENTORY OF EQUIPMENT.

Box-cars	7
Open cars	13
Horses	68
Harnesses (pairs of)	25
Other articles of equipment:	
Snow-plows	3
Sled	1
Buggy	1
Wagon	1
Carts	2
Largest number of horses owned at any time during the year	68
Smallest number of horses owned at any time during the year	49
Average number of horses owned during the year	60

GENERAL BALANCE-SHEET, JUNE 30, 1890.

ASSETS.

Construction	$28,520.68
Equipment	26,417.72
Land and buildings	15,179.25
Cash and cash assets	1,503.55
Total assets	$71,621.20

LIABILITIES.

Capital stock	$20,000.00
Unfunded debt	45,613.72
Surplus	6,007.48
Total liabilities	$71,621.20

COPY OF PROFIT AND LOSS ACCOUNT FOR THE YEAR ENDING JUNE 30, 1890.

DR.

To expenses	$20,209.65
interest	1,313.36
dividends	600.00
balance carried forward	6,007.48
	$28,130.49

CR.

By balance	$5,351.22
total income	22,779.27
	$28,130.49

DESCRIPTION OF RAILWAY.

Length of railway owned by company, measured as a single track, exclusive of sidings	23,789 feet.
Aggregate length of switches, sidings, etc.	2,088 "
Total length of track, measured as single track	25,877 "
Total length of track paved	4 miles.
Weight of rail per yard, and description of rail: Tram and girder, 35 lbs.	
Description of the several lines or routes operated by the company:	
Main line, — Kinsley, Main, and Canal streets to Concord depot.	
Main street, — From Kinsley street, south through Main street to Lawndale Garden.	
West Pearl street, — From Tremont House, west through West Pearl, Palm, Hollis, and Hanover streets to stables.	
Cost per horse per day for feeding, bedding, and shoeing	24¾ cents.

MILES RUN, ETC.

Total number of miles run during the year	138,860
Total number of passengers carried in the cars	436,938
Total number of round trips for the year	34,715
Number of persons regularly employed by company	14
Rates of fare	4, 4½, 5 cents.

STATEMENT OF EACH ACCIDENT.

March 17. — Delbert E. Bly, a small boy about twelve years of age, while at play in the street, pitched head first under the horses while a car was in motion on Main street, near Pearl street, and before the car could be stopped the wheels passed over him, killing him instantly.

May 30. — Gertie M. Smith, a little girl about 4 years of age, ran from her mother's side upon the sidewalk directly under the car (behind the horses), and before the car could be stopped it passed over her. She lived only about 48 hours. Car going west on Bridge street near the bridge over Nashua river.

PROPER ADDRESS OF THE COMPANY.

NASHUA STREET RAILWAY,

NASHUA, N. H.

NAMES AND RESIDENCES OF OFFICERS.

George H. Knowles, *President*, 77 State street, Boston, Mass.; George E. Mudgett, *Superintendent*, Nashua, N. H.; John D. Chandler, *Treasurer* and *Clerk of Corporation*, Nashua, N. H.

NAMES AND RESIDENCES OF DIRECTORS LAST ELECTED.

George H. Knowles, Boston, Mass.; John A. Fisher, John D. Chandler, William H. Knowles, Nashua, N. H.; Charles Williams, Manchester, N. H.

GEORGE H. KNOWLES,
JOHN A. FISHER,
JOHN D. CHANDLER,
Directors.

STATE OF NEW HAMPSHIRE.

HILLSBOROUGH SS. NASHUA, December 16, 1890. Then personally appeared George H. Knowles, John A. Fisher, and John D. Chandler, and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

MOSES D. TAYLOR,
Justice of the Peace.

REPORT

OF THE

LACONIA AND LAKE VILLAGE STREET RAILWAY COMPANY

FOR THE SIX MONTHS ENDING JUNE 30, 1890.

CAPITAL STOCK AND DEBT.		
CAPITAL STOCK.		
Capital stock authorized by charter	$30,000	
Capital stock authorized by votes of company	20,000	
Capital stock paid (par value of shares, $50)		$20,000.00
Number of stockholders	32	
DEBT.		
Unfunded debt, as follows:		$6,725.75
Notes payable	$6,700.00	
Accounts payable	25.75	
Total gross debt		$26,725.75
Amount of cash assets, viz.:		64.25
Cash overdrawn	$30.19	
Supplies	94.44	
Net debt		$26,661.50
PERMANENT INVESTMENTS.		
RAILWAY.		
Grading and paving; Track, including timber, rails, etc., and laying		$11,298.09
Interest during construction, commissions, discounts, etc.		240.00
Total cost of construction		$11,538.09

EQUIPMENT.		
Horses		$3,814.40
Cars		6,030.00
Other articles of equipment		2,671.00
Total cost of equipment		$12,515.40

LAND AND BUILDINGS.		
Total cost of land and buildings		$8,688.99
Total amount of permanent investments		$32,742.48
Cash assets		64.25
Total property and assets of company		$32,806.73

PROPERTY ACCOUNTS: CHARGES AND CREDITS DURING THE SIX MONTHS.		
Extension of tracks in process (1,948 feet)		$565.42
New horses (2)		299.40
New cars		54.00
Other equipment		90.00
Land and buildings		92.72
Total addition to property		$1,101.54

REVENUE FOR THE SIX MONTHS.		
Received from passengers on railways operated by this company		$4,303.57
Income from other sources:		157.75
Barge	$89.75	
Rent	68.00	
Total income from all sources		$4,461.32

EXPENSES OF OPERATING THE RAILWAY FOR THE SIX MONTHS.	
Repairs of roadbed and track	$77.53
Repairs of cars and other vehicles, harness, and horseshoeing	224.23
Repairs on buildings	13.40
Wages and salaries of president, treasurer, superintendent, and their clerks	50.00
Wages and salaries of all other persons employed in operating the road	1,679.29
Provender	1,090.59
Insurance	127.76

Office expenses, and all other expenses not included above	$261.43
Total expenses of operating	$3,524.23

NET INCOME, DIVIDENDS, ETC.

Total net income above operating expenses	$937.09
Dividends declared (5 per cent for the year)	1,000.00
Balance for the six months, or deficiency	62.91
Surplus at commencement of year	6,143.89
Total surplus June 30, 1890	6,080.98

INVENTORY OF EQUIPMENT, JUNE 30, 1890.

Box-cars	4
Open cars	4
Horses	22
Harnesses (pairs of)	8
Barges	2
Sleighs	6
Other articles of equipment: Wagon, cart, flat car, and plow.	
Largest number of horses owned at any time during the six months	22
Smallest number of horses owned at any time during the six months	20
Average number of horses owned during the six months	20

GENERAL BALANCE-SHEET, JUNE 30, 1890.

ASSETS.

Construction	$11,538.09
Equipment	12,515.40
Land and buildings	8,688.99
Cash and cash assets	64.25
Total assets	$32,806.73

LIABILITIES.

Capital stock	$20,000.00
Unfunded debt	6,725.75
Surplus	6,080.98
Total liabilities	$32,806.73

COPY OF PROFIT AND LOSS ACCOUNT FOR THE SIX MONTHS ENDING JUNE 30, 1890.	
DR.	
To expenses	$3,524.23
dividends	1,000.00
balance carried forward July 1, 1890	6,080.98
	$10,605.21
CR.	
By balance January 1, 1890	$6,143.89
total income	4,461.32
	$10,605.21

DESCRIPTION OF RAILWAY.	
Length of railway owned by company, measured as a single track	2.452 miles.
Aggregate length of switches, sidings, etc.	.220 "
Total length of track measured as single track	2.672 "
Total length of track paved	.520 "
Weights of rail per yard, and description of rail: Street, 34 lbs., T, 25 lbs.	
Total length of railway, measured as single track, not including sidings, etc., operated by this company	2.452 "

MILES RUN, ETC.	
Total number of miles run	22,640
Total number of passengers carried in the cars	90,006
Total number of round trips	4,999
Number of persons regularly employed by company	6
Rates of fare	4, 5, 6 cents.

PROPER ADDRESS OF THE COMPANY.

LACONIA AND LAKE VILLAGE HORSE RAILROAD,

LACONIA, N. H.

NAMES OF OFFICERS.

A. G. Folsom, *President*, B. S. Keniston, *Superintendent*, Edmund Little, *Treasurer* and *Clerk of Corporation*.

NAMES OF DIRECTORS LAST ELECTED.

A. G. Folsom, C. A. Busiel, S. C. Clark, S. B. Smith, E. C Lewis, G. Cook, J. Gilbert.

A. G. FOLSOM,
S. B. SMITH,
E. C. LEWIS,
J. GILBERT,
Directors.
EDMUND LITTLE,
Treasurer.
B. S. KENISTON,
Superintendent.

STATE OF NEW HAMPSHIRE.

BELKNAP SS. October 29, 1890. Then personally appeared A. G. Folsom, Edmund Little, and B. S. Keniston, and severally made oath to the truth of the foregoing statement by them subscribed, according to their best knowledge and belief.

TRUE E. PRESCOTT,
Justice of the Peace.

NOTE. — The Dover Horse Railroad having passed out of existence, it has been found impracticable to obtain returns covering this last year of its operation, and its successor, the Union Street Railroad, was not completed until after the close of the railroad year ending June 30, 1890. Hence we have no returns for any street railway in Dover for this report.

PART IV.

TABULATED STATEMENTS.

EARNINGS AND EXPENSES FOR YEAR ENDING JUNE 30, 1890.

RAILROADS.	Receipts from passenger department.	Receipts from freight department.	Rents for use of roads.	Income from other sources.	Total income.	Expenses and taxes.	Net income.	Rents paid.
Atlantic & St. Lawrence	$80,456.15	$218,657.27	.....	$807.69	$299,921.11	$275,229.05	$24,692.06	.....
Boston & Maine	7,763,162.11	6,788,585.06	$9,662.67	424,100.50	14,985,510.34	10,008,185.01	4,977,325.33	* $3,241,548.57
Concord & Montreal	1,155,340.26	1,588,349.40	13,071.04	18,840.91	2,775,601.61	2,189,454.68	586,146.93	66,527.00
Pemigewasset Valley	.....	.....	† 30,204.00	300.00	30,504.00	312.19	30,191.81	.....
Eastern in New Hampshire	.....	.....	22,500.00	113.50	22,613.50	429.32	22,184.18	.....
Manchester & Lawrence	.....	.....	102,000.00	4,078.80	106,078.80	7,107.42	98,971.38	.....
Nashua & Lowell	.....	.....	73,000.00	18,089.74	91,089.74	10,553.57	80,536.17	.....
Portsmouth & Dover	.....	.....	46,140.00	.....	46,140.00	.....	46,140.00	.....
Portsmouth, Gt. Falls & Conway	.....	.....	‡ 22,500.00	55,506.95	78,006.95	.....	78,006.95	.....
West Amesbury Branch	.....	.....	5,700.00	.....	5,700.00	486.19	5,213.81	.....
Wolfeborough	.....	.....	2,190.00	.....	2,190.00	.....	2,190.00	.....
Worcester, Nashua & Rochester	.....	.....	254,000.00	.....	254,000.00	§ 1,777.64	252,121.44	.....
Cheshire	202,896.67	442,932.22	.....	31,917.43	677,746.32	451,621.63	194,207.00	.....
Lessees Monadnock	14,104.83	26,861.60	.....	952.67	41,919.10	28,340.36	13,578.74	12,000.00
Mount Washington	26,000.50	.....	.....	677.78	26,678.28	19,611.17	7,067.11	.....

Fitchburg	1,995,094.23	3,961,775.72	58,500.00	244,163.38	6,259,533.33	4,525,605.84	1,733,927.49	271,980.00
Monadnock	.....	.....	12,000.00	435.11	12,435.11	513.50	11,941.61	.....
Sullivan County	93,151.90	152,354.04	.....	330.83	245,836.77	146,220.66	99,616.11	3,687.56
Ashuelot	.....	.....	12,613.76	.....	12,613.76	.....	12,613.76	.....
Boston & Lowell	.....	.....	685,254.91	.....	685,254.91	.....	685,254.91	.....
Dover & Winnipesaukee	.....	.....	29,000.00	.....	29,000.00	.....	29,000.00	.....
Peterborough	.....	.....	35,699.64	.....	35,699.64	.....	35,699.64	.....
Wilton	.....	.....	16,950.00	.....	16,950.00	.....	16,950.00	.....
Concord & Portsmouth	.....	.....	31,250.00	.....	31,250.00	.....	31,250.00	.....
Suncook Valley	.....	.....	18,375.00	.....	18,375.00	.....	18,375.00	.....
Northern	.....	.....	199,920.00	.....	199,920.00	.....	199,920.00	.....
Peterborough & Hillsborough	.....	.....	35,699.64	.....	35,699.64	.....	35,699.64	.....
Portland & Rochester	101,618.40	117,399.39	.....	2,442.62	221,460.41	165,477.47	55,982.94	.....
Worcester, Nashua & Rochester	.....	.....	250,000.00	.....	250,000.00	.....	250,000.00	.....

* Includes Eastern Railroad of surplus earnings for year ending September 30, 1889, paid as rent, amounting to $436,000.
† Twelve months, to February 1, 1890. ‡ Six months' rental. § Error, expense account short $100.92.

ASSETS, LIABILITIES, AND DIVIDENDS.

Railroads.	Capital stock.	Funded debt.	Unfunded debt.	Total debt.	Cash assets.	Net debt.	Net cash assets.	Interest accrued.	Dividends paid.	Rate.
Atlantic & St. Lawrence	$5,484,000.00	$3,000,000.00	.....	$3,000,000.00	.....	$3,000,000.00	.....	$167,269.30	.....	.....
Boston & Maine	16,297,743.80	17,393,920.31	$4,782,357.87	22,176,278.18	$5,250,865.42	16,925,412.76	.....	569,160.34	* $665,000.00	.0950
Concord & Montreal	4,800,000.00	3,717,900.00	1,331,158.49	5,049,058.49	761,380.88	4,287,677.61	.....	107,637.96	411,916.67	.0858
Pemigewasset Valley	503,400.00	.....	.....	.....	523.26	.....	$523.26	.....	30,204.00	.0600
Eastern in New Hampshire	492,500.00	.....	3,049.80	3,049.80	5,559.90	.....	2,510.10	.....	22,162.50	.0450
Manchester & Lawrence	1,000,000.00	.....	6,774.50	6,774.50	56,153.45	.....	49,378.95	.....	100,000.00	.1000
Nashua & Lowell	800,000.00	300,000.00	17,961.50	317,961.50	319,121.44	.....	1,159.94	17,631.24	72,000.00	.0900
Portsmouth & Dover	769,000.00	.....	288.00	288.00	888.00	.....	600.00	.....	46,140.00	.0600
Portsmouth, Gt. Falls & Conw'y	1,150,300.00	1,000,000.00	3,271.00	1,003,271.00	4,298.47	998,972.53	.....	† 22,500.00	55,407.50	‡ .0925
West Amesbury Branch	57,000.00	57,000.00	35.50	57,035.50	667.43	56,368.07	.....	3,990.00	855.00	.0150
Wolfeborough	385,500.00	.....	.....	.....	.....	.....	.....	.....	2,190.00	§.0600
Worcester, Nashua & Roch's'r	3,099,800.00	1,540,000.00	234,887.30	1,774,887.30	40,921.84	1,733,965.46	.....	85,927.44	‖ 183,864.00	.0600
Cheshire	2,153,300.00	800,000.00	267,329.36	1,067,329.36	388,998.87	678,330.49	.....	49,227.61	126,000.00	.0600
Mt. Washington	129,500.00	.....	558.35	558.35	4,598.86	.....	4,040.51	.....	9,065.00	.0700
Fitchburg	20,775,100.00	18,534,600.00	2,122,902.87	20,657,502.87	2,971,405.81	17,686,097.06	.....	807,416.44	261,835.60	.0200
Monadnock	205,400.00	48,000.00	.....	48,000.00	3,541.61	44,458.39	.....	2,400.00	6,000.00	.0300
Sullivan County	500,000.00	.....	206,488.11	206,488.11	1,724.40	204,763.71	.....	12,549.53	40,000.00	.0800

Ashuelo	210,000.00									
Boston & Lowell	5,529,400.00									
Dover & Winnipesaukee	480,000.00									
Peterborough	385,000.00									
Wilton	240,000.00									
Concord & Portsmouth	350,000.00									
Manchester & North Weare	200,000.00									
Nashua, Acton & Boston	500,000.00									
Suncook Valley	341,700.00									
Northern	3,068,400.00									
Concord & Claremont	412,400.00									
Peterborough & Hillsborough	45,000.00									
Portland & Rochester	592,070.45				29,495.08		29,495.08		35,524.22	.0600
Profile & Franconia Notch	200,000.00									
Whitefield & Jefferson	170,000.00									

* On $7,000,000 old stock. † Six months. ‡ 5,980 shares. § On 365 shares. ‖ On 30,644 shares.

NUMBER OF STOCKHOLDERS AND AMOUNT OF STOCK HELD IN NEW HAMPSHIRE FOR THE YEAR ENDING JUNE 30, 1890.

RAILROADS.	Total number of stockholders.	Number of stockholders in New Hampshire.	Amount of stock held in New Hampshire.
Atlantic & St. Lawrence	1,404	.....	.....
Boston & Maine	4,016	1,009	$2,038,800.00
Concord & Montreal	2,420	1,311	3,143,100.00
Pemigewasset Valley	174	127	317,600.00
Eastern in New Hampshire	383	204	315,700.00
Manchester & Lawrence	570	321	609,600.00
Nashua & Lowell	393	187	247,400.00
Portsmouth & Dover	150	138	753,300.00
Portsmouth, Great Falls & Conway	350	48	77,000.00
West Amesbury Branch	27	3	15,700.00
Wolfeborough	80	63	28,200.00
Worcester, Nashua & Rochester	825	187	757,100.00
Cheshire	515	38	350,600.00
Mount Washington	36	23	84,400.00
Fitchburg	4,314	263	370,000.00
Monadnock	5	3	103,000.00
Sullivan County	9	.....	.....
Portland & Rochester	92	3	1,100.00

MILEAGE AND COST OF ROADS AND EQUIPMENT.

RAILROADS.	Main line of road.	Same in New Hampshire.	Double track.	Same in New Hampshire.	Branches owned.	Same in New Hampshire.	Double track on branches.	Sidings and other tracks.	Same in New Hampshire.
Ashuelot	24 00	23.21	.....	.....	.....	.....	.....	4.97	4.66
Atlantic & St. Lawrence	149.58	52.06	.....	.....	.....	.....	.....	33.85	10.24
Boston & Lowell	26.75	.....	26.75	.....	71.34	.....	15.45	63.92	.....
Pemigewasset Valley	20.06	20.06	.....	.....	.....	.....	.....	.37	.37
Concord & Montreal	201.30	201.30	34.53	34.53	81.78	65.52	.....	110.20	107.50
Boston & Maine	229.81	104.69	99.66	15.17	85.89	2.75	5.29	193.14	29.86
Dover & Winnipesaukee	29.00	29.00	.....	.....	.....	.....	.....	2.00	2.00
Eastern in New Hampshire	16.08	16.08	5.94	5.94	.....	.....	.....	10.81	10.81
Manchester & Keene	29.59	29.59	.....	.....	.....	.....	.....	3.00	3.00
Manchester & Lawrence	22.39	22.39	.....	.....	.....	.....	.....	3.38	2.52
Nashua & Lowell	14.50	5.25	14.50	5.25	.....	.....	.....	6.08	1.95
Peterborough	10.50	10.50	.....	.....	.....	.....	.....	1.00	1.00
Portsmouth & Dover	10.88	10.88	.....	.....	.....	.....	.....	1.85	1.85
Portsmouth, Great Falls & Conway	72.86	69.94	.....	.....	72.86	69.94	.....	12.77	11.13
West Amesbury Branch	4.45	2.32	.....	.....	.....	.....	.....	.49	.38
Wilton	15.50	15.50	.....	.....	.....	.....	.....	2.24	2.24
Wolfeborough	12.03	12.03	.....	.....	.....	.....	.....	2.09	2.09
Worcester, Nashua & Rochester	94.48	55.02	18.13	.....	.....	.....	.....	29.47	13.22
Cheshire	53.62	42.81	.....	.....	.....	.....	.....	20.32	16.93
Monadnock	15.80	13.76	.....	.....	.....	.....	.....	.70	.70
Concord & Portsmouth	40.50	40 50	.....	.....	7.00	7.00	.....	8.68	8.68
Manchester & North Weare	19.00	19.00	.....	.....	.....	.....	.....	1.50	1.50
Nashua, Acton & Boston	20.83	4.57	.....	.....	.....	.....	.....	3.27	1.59
Suncook Valley	17.37	17.37	.....	.....	.....	.....	.....	2.38	2.38
Fitchburg	189.96	.....	100.56	.....	109.09	9.47	.....	188.48	.....
Mount Washington	3.33	3.33	.....	.....	.....	.....	.....	.....	.....
Northern	69.50	69.50	.....	.....	13.41	13.41	.....	16.54	16.54
Concord & Claremont	56.00	56.00	.....	.....	14.90	14.90	.....	7.87	7.87
Peterborough & Hillsborough	18.51	18.51	.....	.....	.....	.....	.....	1.44	1.44

MILEAGE AND COST OF ROADS AND EQUIPMENT.— *Continued.*

RAILROADS.	Main line of road.	Same in New Hampshire.	Double track.	Same in New Hampshire.	Branches owned.	Same in New Hampshire.	Double track on branches.	Sidings and other tracks.	Same in New Hampshire.
Portland & Rochester	52.50	3.50	.....	.....	.....	.....	.....	13.82	1.50
Portland & Ogdensburg	91.35	40.54	.....	.....	.....	.....	.....	.....	.....
Profile & Franconia Notch	13.33	13.33	.....	.....	.....	.....	.....	.....	.....
Sullivan County	26.00	25.81	8.68	8.68	.....	.....	.....	5.44	5.44
Whitefield and Jefferson	13.00	13.00	.....	.....	5.00	5.00	.....	3.00	3.00
Upper Coos	21.17	21.17	.....	.....	.....	.....	.....	.....	.....
Kilkenny	10.00	10.00	.....	.....	.....	.....	.....	.....	.....
Bartlett & Albany	12.00	12.00	.....	.....	.....	.....	.....	.....	.....
Lake Village to Alton Bay	18.00	18.00	.....	.....	18.00	18.00	.....	.....	.....
Belmont Junction to Belmont	4.00	4.00	.....	.....	4.00	4.00	.....	.....	.....
Pittsfield to Center Barnstead	4.45	4.45	.....	.....	4.45	4.45	.....	.....	.....
Great Falls Branch	2.75	2.75	.....	.....	2.75	2.75	.....	.....	.....

RAILROADS.	Total length computed as single track.	Same in New Hampshire.	Other roads operated.	Same in New Hampshire.	Total road operated.	Same in New Hampshire.	Cost of road and equipment.
Ashuelot	28.97	27.88			24.00	23.21	$238,756.25
Atlantic & St. Lawrence	183.43	62.30			149.58	52.06	2,952,781.00
Boston & Lowell	204.21		187.26	187.26	187.86	187.26	7,634,738.80
Pemigewasset Valley	20.43	20.43					502,999.75
Concord & Montreal	427.81	408.85	85.27	85.27	368.35	352.09	7,705,993.89
Boston & Maine	613.79	152.47	894.33	380.88	1,210.03	488.32	32,254,048.60
Dover & Winnipesaukee	31.00	31.00					480,000.00
Eastern in New Hampshire	32.83	32.83					780,535.36
Manchester & Keene	32.59	32.59					182,436.00
Manchester & Lawrence	25.77	24.91					1,000,000.00
Nashua & Lowell	35.08	12.45					909,410.62
Peterborough	11.50	11.50					588,950.00
Portsmouth & Dover	12.73	12.73					768,400.00
Portsmouth, Great Falls & Conway	85.63	81.07					2,150,300.00
West Amesbury Branch	4.94	2.70					114,000.00
Wilton	17.74	17.74					242,600.00
Wolfeborough	14.12	14.12					385,500.00
Worcester, Nashua & Rochester	142.08	68.24					4,553,921.02
Cheshire	73.94	59.74	26.21	13.75	64.01	42.81	2,836,265.01
Monadnock	16.50	14.46					371,701.76
Concord & Portsmouth	56.18	56.18					350,000.00
Manchester & North Weare	20.50	20.50					200,000.00
Nashua, Acton & Boston	24.10	6.16					1,057,031.20
Suncook Valley	19.75	19.75					348,199.19
Fitchburg	588.77	9.47	70.03		369.08	9.47	37,258,944.62
Mount Washington	3.33	3.33			3.33	3.33	139,500.00
Northern	99.45	99.45					3,068,400.00
Concord & Claremont	78.77	78.77					1,131,206.38
Peterborough & Hillsborough	19.95	19.95					209,298.44

* Included in the main line of the Boston & Maine.

MILEAGE AND COST OF ROADS AND EQUIPMENT. — *Continued.*

RAILROADS.	Total length computed as single track.	Same in New Hampshire.	Other roads operated.	Same in New Hampshire.	Total road operated.	Same in New Hampshire.	Cost of road and equipment.
Portland & Rochester	66.32	5.00	.....	.....	52.50	3.50	$592,070.45
Portland & Ogdensburg	.....	.....	.....	.....	91.35	40.54	.....
Profile & Franconia Notch	.....	.....	.....	.....	.....	.....	216,017.02
Sullivan County	40.12	39.93	.....	.....	26.00	25.81	838,175.70
Whitefield & Jefferson	21.00	21.00	.....	.....	18.00	18.00	189,504.39
Upper Coos	21.17	21.17	.....	.....	21.17	21.17	.....
Kilkenny	10.00	10.00	.....	.....	10.00	10.00	.....
Bartlett & Albany	12.00	12.00	.....	.....	12.00	12.00	.....
Lake Village to Alton Bay	18.00	18.00	.....	.....	18.00	18.00	.....
Belmont Junction to Belmont	4.00	4.00	.....	.....	4.00	4.00	.....
Pittsfield to Center Barnstead	4.45	4.45	.....	.....	4.45	4.45	.....
Great Falls Branch	2.75	2.75	.....	.....	2.75	2.75	.....

RAILROAD TAX FOR 1889.

	Valuation.	Proportional.	Amount in towns.	Valuation for taxation.	Tax.
Eastern	$425,000	$374,000	$41,666	$332,334	$4,918.54
Boston & Maine	2,000,000	1,760,000	59,240	1,700,760	25,171.25
Ashuelot	210,000	184,800	10,450	174,350	2,580.38
Boston, Concord & Montreal	2,500,000	2,200,000	.....	2,200,000	32,560.00
Fitchburg	35,000	30,800	2,000	28,800	426.24
Nashua & Lowell	400,000	352,000	39,700	312,300	4,622.04
Wilton	250,000	220,000	1,150	218,850	3,238.98
Cheshire	1,500,000	1,320,000	49,700	1,270,300	18,800.44
Grand Trunk	600,000	528,000	1,400	526,600	7,793.68
Northern	2,000,000	1,760,000	11,200	1,748,800	25,882.24
Concord	2,700,000	2,376,000	87,800	2,288,209	33,865.36
Manchester & North Weare	80,000	70,400	.....	70,400	1,041.92
Concord & Portsmouth	600,000	528,000	.....	528,000	7,814.40
Dover & Winnipesaukee	375,000	330,000	4,800	325,200	4,812.96
Portsmouth, Gt. Falls & Conw'y	500,000	440,000	10,650	429,350	6,354.38
Manchester & Lawrence	1,500,000	1,320,000	3,140	1,316,860	19,489.53
Concord & Claremont	600,000	528,000	4,200	523,800	7,752.24
Sullivan County	500,000	440,000	2,850	437,150	6,469.82
Worcester, Nashua & Rochest'r	1,200,000	1,056,000	18,600	1,037,400	15,353.52
Mount Washington	150,000	132,000	.....	132,000	1,953.60
Suncook Valley	140,000	123,200	3,600	119,600	1,770.08
Portland & Rochester	30,000	26,400	.....	26,400	390.72
Monadnock	100,000	88,000	800	87,200	1,290.56
West Amesbury Branch	20,000	17,600	.....	17,600	260.48
Portland & Ogdensburg	250,000	220,000	.....	220,000	3,256.00
Nashua, Acton & Boston	20,000	17,600	.....	17,600	260.48
Portsmouth & Dover	100,000	88,000	.....	88,000	1,302.40
Peterborough	50,000	44,000	3,900	40,160	593.48
Peterborough & Hillsborough	70,000	61,600	.....	61,600	911.68
Wolfeborough	50,000	44,000	4,000	40,000	592.00
Manchester Horse	15,000	13,200	1,000	12,200	180.56
Totals	$18,970,000	$16,693,600	$361,846	$16,331,754	$241,709.96

The expense of the railroad commission is met by a tax levied upon the gross receipts of the various railroads. It is $7,380.38, against $6,946.75 for 1888.

RAILROAD TAX FOR 1890.

	Valuation.	Proportional.	Amount in towns.	Valuation for taxation.	Tax.
Boston & Maine	$2,250,000	$1,980,000	$59,240	$1,920,760	$28,811.40
Cheshire	1,500,000	1,320,000	49,700	1,270,300	19,054.50
Concord & Claremont	600,000	528,000	3,900	524,100	7,861.50
Concord & Montreal	6,000,000	5,280,000	135,446	5,144,554	77,168.31
Concord & Portsmouth	600,000	528,000	.....	528,000	7,920.00
Connecticut River	225,000	198,000	10,450	187,550	2,813.25
Dover & Winnipesaukee	375,000	330,000	4,800	325,200	4,878.00
Eastern	425,000	374,000	41,666	332,334	4,985.01
Fitchburg	35,000	30,800	2,000	28,800	432.00
Grand Trunk	600,000	528,000	1,400	526,600	7,899.00
Manchester & Keene	120,000	105,600	.....	105,600	1,584.00
Manchester & Lawrence	1,500,000	1,320,000	3,140	1,316,860	19,752.90
Manchester & North Weare	80,000	70,400	.....	70,400	1,056.00
Monadnock	100,000	88,000	800	87,200	1,308.00
Mount Washington	150,000	132,000	.....	132,000	1,980.00
Nashua, Acton & Boston	20,000	17,600	.....	17,600	264.00
Nashua & Lowell	400,000	352,000	39,700	312,300	4,684.50
Northern	2,250,000	1,980,000	11,200	1,968,800	29,532.00
Peterborough	50,000	44,000	3,900	40,100	601.50
Peterborough & Hillsborough	70,000	61,600	.....	61,600	924.00
Portsmouth & Dover	100,000	88,000	.....	88,000	1,320.00
Portsmouth, Gt. Falls & Conw'y	500,000	440,000	10,650	429,350	6,440.25
Portland & Ogdensburg	300,000	264,000	500	263,500	3,952.50
Portland & Rochester	30,000	26,400	.....	26,400	396.00
Profile & Franconia Notch	100,000	88,000	.....	88,000	1,320.00
Sullivan County	700,000	616,000	2,850	613,150	9,197.25
Suncook Valley	140,000	123,200	3,600	119,600	1,794.00
West Amesbury Branch	20,000	17,600	.....	17,600	264.00
Wilton	250,000	220,000	1,150	218,850	3,282.75
Worcester, Nashua & Rochest'r	1,200,000	1,056,000	18,600	1,037,400	15,561.00
Wolfeborough	50,000	44,000	4,000	40,000	600.00
Manchester Horse	30,000	26,400	1,000	25,400	381.00
Totals	$20,770,000	$18,277,600	$409,692	$17,867,908	$268,018.62

The expense of the railroad commissioners is met by a tax levied upon the gross receipts of the various railroads. It is $7,395.20, against $7,380.38 for 1889.

APPENDIX.

CONSOLIDATIONS AND LEASES.

CONSOLIDATIONS AND LEASES.

CONSOLIDATION

OF THE BOSTON & MAINE AND THE EASTERN RAILROADS.

Articles of agreement between the Boston & Maine Railroad, hereinafter called the Maine Railroad, and the Eastern Railroad Company, hereinafter called the Eastern Railroad.

The Maine Railroad will buy and said Eastern Railroad will sell to it the road, franchises, and property of said Eastern Railroad on the terms and conditions following, to wit:

I. The Eastern Railroad shall assign and convey to the Maine Railroad and the Maine Railroad shall have, hold, and enjoy the road, franchises, and property of said Eastern Railroad of every description, and the said Maine Railroad shall be constituted irrevocably the attorney, with a right to use the name, of said Eastern Railroad so far as may be necessary to secure to said Maine Railroad the full possession and enjoyment of the rights and property purchased.

II. The Maine Railroad shall assume and hereby assumes and shall fulfill all the duties and obligations devolved upon said Eastern Railroad by its charter and any amendments thereof or by any general laws; shall assume, perform, and pay all contracts, debts, and liabilities of said Eastern Railroad as if the same had been originally contracted or incurred by said Maine Railroad, and shall be estopped and hereby estops itself from denying that said contracts, debts, and liabilities were so contracted or incurred by itself; and shall at its own cost defend all suits or legal proceedings of whatever character against said Eastern Railroad, and indemnify said Eastern Railroad against all judgments therein and pay the same as if rendered against said Maine Railroad.

The Maine Railroad further agrees with each creditor or holder of a claim against said Eastern Railroad that it will pay and discharge the same as if originally contracted or incurred by said Maine Railroad and that any such creditor or claimant may accept and avail itself of this provision of this agreement at any time while said debt or claim remains outstanding and unsatisfied and that upon the request of the holder of any bond, note, or other evidence of debt it will assume the same by written guaranty or other appropriate written contract.

III. The Maine Railroad shall pay $100,000 annually to the trustees under the mortgage of the Eastern Railroad for the sinking fund therein provided for.

IV. The Maine Railroad shall issue additional capital stock as follows:

First. To the holders of the preferred stock of the Eastern Railroad, in exchange par for par for their present holdings, shares amounting at the par value to $3,149,600 — said stock to be a first preferred six per cent stock, noncumulative, and entitled to dividends payable semi-annually from annual net profits in preference and priority to the common stock of the Maine Railroad.

Second. To the holders of the common stock of the Eastern Railroad and of the Portsmouth, Great Falls & Conway Railroad, in exchange for their present holdings, 51,200.81 shares of common stock of said Maine Railroad — or .8328 of a share of said common stock of said Maine Railroad for every one share now held by them; all shares of said preferred and common stock of said Eastern Railroad and said Portsmouth, Great Falls & Conway Railroad so exchanged and the certificates thereof to be transferred and delivered to said Maine Railroad.

Third. To the holders of the present capital stock of the Maine Railroad 10,278.19 shares of common stock of said Maine Railroad — or to every holder of 6 4-5 shares of said present capital stock of said Maine Railroad one share additional.

Fourth. Fractional interests shall be represented by scrip convertible into common stock of the Maine Railroad when presented in sums of one hundred dollars.

V. This agreement shall be effectual and a proper conveyance of the purchased road, franchises, and property be made by the Eastern Railroad to the Maine Railroad, upon the approval of said agreement by stockholders as required by law, and upon the making and approval by the directors and stockholders of the respective corporations as required by law of a like agreement for the purchase by the Maine Railroad of the road, franchises, and property of the Portsmouth, Great Falls & Conway Railroad.

From and after the making of said deed the salaries of any officers or employés of the Eastern Railroad, subject to the provisions of any existing contracts respecting the same, shall cease and be terminated.

VI. The Maine Railroad shall be at liberty to declare a dividend of 4½ per cent on its capital stock as now existing, payable May 15, 1890, and the Eastern Railroad shall be at liberty to declare a dividend of 3¼ per cent on its common stock as now existing, also payable May 15, 1890, and the said Portsmouth, Great Falls & Conway Railroad shall be at liberty to declare a dividend of the same amount and payable on the same day on that portion of its capital stock not owned by said Eastern Railroad — said dividends of said Eastern Railroad and said Portsmouth, Great Falls & Conway Railroad to be payments on account under the lease of the Eastern Railroad to the Maine Railroad, if for any reason the purchases contemplated by this agreement should fail to be made. Except as herein provided no other dividends shall be made by said Maine Railroad, said Eastern Railroad, or said Portsmouth, Great Falls & Conway Railroad until after the stockholders of the said Maine Railroad, said Eastern Railroad, and said Portsmouth, Great Falls & Conway Railroad have taken final action upon the subject of the approval of the agreements of purchase herein contemplated.

VII. The conveyance of said Eastern Railroad shall stipulate that it shall make, execute, and deliver or cause to be made, executed, and delivered to said Maine Railroad at any and all times any such other contract, conveyance, or instrument of further assurance as shall be reasonably required, and be advised by counsel as necessary to completely execute and accomplish the objects and purposes of this agreement.

In witness whereof the parties to this and one other instrument of like tenor and terms, have caused their corporate seals to be affixed and the same to be executed by their respective presidents thereunto duly authorized this eighth day of May, A. D. 1890.

[Seal.] BOSTON & MAINE RAILROAD,
By Frank Jones, *President.*

[Seal.] EASTERN RAILROAD COMPANY,
By Samuel C. Lawrence, *President.*

CONSOLIDATION

OF THE BOSTON & MAINE AND THE PORTSMOUTH, GREAT FALLS & CONWAY.

Articles of agreement between the Boston & Maine Railroad, hereinafter called the Maine Railroad, and the Portsmouth, Great Falls & Conway Railroad, hereinafter called the Conway Railroad.

The Maine Railroad will buy and said Conway Railroad will sell to it the road, franchises, and property of said Conway Railroad on the terms and conditions following, to wit:

I. The Conway Railroad shall assign and convey to the Maine Railroad and the Maine Railroad shall have, hold, and enjoy the road, franchises, and property of said Conway Railroad of every description, and the said Maine Railroad shall be constituted irrevocably the attorney, with a right to use the name, of said Conway Railroad, so far as may be necessary to secure to said Maine Railroad the full possession and enjoyment of the rights and property purchased.

II. The Maine Railroad shall assume and hereby assumes and shall fulfill all the duties and obligations devolved upon said Conway Railroad by its charter, and any amendments thereof or by any general laws; shall assume, perform, and pay all contracts, debts, and liabilities of said Conway Railroad as if the same had been originally contracted or incurred by said Maine Railroad, and shall be estopped and hereby estops itself from denying that said contracts, debts, and liabilities were so contracted or incurred by itself; and shall at its own cost defend all suits or legal proceedings of whatever character against said Conway Railroad, and indemnify said Conway Railroad against all judgments therein and pay the same as if rendered against said Maine Railroad.

The Maine Railroad further agrees with each creditor or holder of a claim against said Conway Railroad that it will pay and discharge the same as if originally contracted or incurred by said Maine Railroad, and that any such creditor or claimant may accept and avail itself of this provision of this agreement at any time while said debt or claim remains outstanding and unsatisfied, and that upon the request of the holder of any bond, note, or other evidence of debt it will assume the same by written guaranty or other appropriate written contract.

III. The Maine Railroad shall pay $100,000 annually to the trustees under the mortgage of the Eastern Railroad Company for the sinking fund therein provided for.

IV. The Maine Railroad shall issue additional capital stock as follows:

First. To the holders of the preferred stock of said Eastern Railroad Company, in exchange par for par for their present holdings, shares amounting at the par value to $3,149,600 — said stock to be a first preferred six per cent stock, non-cumulative, and entitled to dividends payable semi-annually from annual net profits in preference and priority to the common stock of the Maine Railroad.

Second. To the holders of the common stock of said Eastern Railroad Company and of said Conway Railroad, in exchange for their present holdings, 51,200.81 shares of common stock of said Maine Railroad — or .8328 of a share of said common stock of said Maine Railroad for every one share now held by them; all shares of said preferred and common stock of said Eastern Railroad Company and said Conway Railroad so exchanged and the certificates thereof to be transferred and delivered to said Maine Railroad.

Third. To the holders of the present capital stock of the Maine Railroad — 10,278.19 shares of common stock of said Maine Railroad — or to every holder

of 6 4-5 shares of said present capital stock of said Maine Railroad one share additional.

Fourth. Fractional interests shall be represented by scrip convertible into common stock of the Maine Railroad when presented in sums of one hundred dollars.

V. This agreement shall be effectual and a proper conveyance of the purchased road, franchises, and property be made by the Conway Railroad to the Maine Railroad upon the approval of said agreement by stockholders as required by law, and upon the making and approval by the directors and stockholders of the respective corporations as required by law, of a like agreement for the purchase by the Maine Railroad of the road, franchises, and property of said Eastern Railroad Company.

From and after the making of said deed the salaries of any officers or employés of the Conway Railroad, subject to the provisions of any existing contracts respecting the same, shall cease and be terminated.

VI. The Maine Railroad shall be at liberty to declare a dividend of 4½ per cent on its capital stock as now existing, payable May 15, 1890, and said Eastern Railroad Company shall be at liberty to declare a dividend of 3¼ per cent on its common stock as now existing, also payable May 15, 1890, and the Conway Railroad shall be at liberty to declare a dividend of the same amount and payable on the same day on that portion of its capital stock not owned by said Eastern Railroad Company — said dividends of said Eastern Railroad Company and said Conway Railroad to be payments on account under the lease of the Eastern Railroad Company to the Maine Railroad, if for any reason the purchases contemplated by this agreement should fail to be made. Except as herein provided no other dividends shall be made by said Maine Railroad, said Eastern Railroad Company, or said Conway Railroad until after the stockholders of said Maine Railroad, said Eastern Railroad Company, and said Conway Railroad have taken final action upon the subject of the approval of the agreements of purchase herein contemplated.

VII. The conveyance of said Conway Railroad shall stipulate that it shall make, execute, and deliver, or cause to be made, executed, and delivered to said Maine Railroad at any and all times any such other contract, conveyance, or instrument of further assurance as shall be reasonably required, and be advised by counsel as necessary to completely execute and accomplish the objects and purposes of this agreement.

In witness whereof the parties to this and one other instrument of like tenor and terms, have caused their corporate seals to be affixed and the same to be executed by their respective presidents thereunto duly authorized this ninth day of May, A. D. 1890.

[Seal.] BOSTON & MAINE RAILROAD,
By Frank Jones, *President.*

[Seal.] PORTSMOUTH, GREAT FALLS & CONWAY RAILROAD,
By Samuel C. Lawrence, *President.*

CONSOLIDATION

OF THE FITCHBURG RAILROAD COMPANY AND THE CHESHIRE RAILROAD COMPANY.

Whereas, by virtue of the provisions of chapter 389 of the acts passed by the General Court of Massachusetts in the year 1887, and of an act passed by the Legislature of the State of New Hampshire on the twenty-fourth day of Au-

gust, 1887, entitled "An act in addition to and in amendment of an act to incorporate the Cheshire Railroad Company, passed December 27, 1844," it is provided that the Fitchburg Railroad Company and the Cheshire Railroad Company may be united and consolidated and may constitute one corporation; now, therefore, the said Fitchburg Railroad Company, and the said Cheshire Railroad Company, by their respective presidents and directors, have agreed upon a union and consolidation of said corporations, in the manner hereinafter set forth, and upon the following terms and conditions, the same to be and become valid and binding when ratified by a vote of a majority in interest of the stockholders of said respective corporations at meetings duly called for that purpose, to be held on or before the thirtieth day of September, A. D. 1890.

ARTICLES OF CONSOLIDATION.

ARTICLE 1. On and after the first day of October, A.D. 1890, the Fitchburg Railroad Company and the Cheshire Railroad Company shall become united and consolidated, subject to the terms and conditions stated in said acts of the Legislatures of Massachusetts and New Hampshire, and shall be and remain one corporation to be called the Fitchburg Railroad Company.

ART. 2. The said consolidated corporation on and after said date shall have and enjoy all the franchises, powers, privileges, property, and rights of every kind belonging to the Fitchburg Railroad Company now existing, and to the Cheshire Railroad Company, and shall assume all the duties, debts, and liabilities of the said two existing railroad companies (except as is hereinafter provided), including the agreements and contracts between the Cheshire Railroad Company and its patrons, which are to be assumed and carried out in letter and spirit by the consolidated company.

ART. 3. The capital stock of said consolidated corporation shall, until the amount thereof shall be changed according to law, consist of twenty-three million four hundred and ninety-seven thousand six hundred dollars ($23,497,600) divided into shares of one hundred dollars ($100) each. Of this amount of capital stock, one hundred and sixty-four thousand nine hundred and seventy-six (164,976) shares shall be preferred stock, and seventy thousand (70,000) shares shall be common stock.

On and after said first day of October, A. D. 1890, each and every share of the preferred capital stock of the present Fitchburg Railroad Company shall at once be and become a share of the preferred capital stock of the consolidated company, and each and every share of the common capital stock of the said present Fitchburg Railroad Company shall at once be and become a share of the common capital stock of the consolidated company. The preferred capital stock of the Cheshire Railroad Company shall be surrendered and extinguished, and the certificates thereof cancelled, and there shall be distributed and delivered to the shareholders of the said Cheshire Railroad Company certificates for twenty-six thousand two hundred and fifty (26,250) shares of the preferred capital stock of the new or consolidated company; such shares to be distributed to the holders of the preferred stock of the Cheshire Railroad Company, *pro rata*, according to the number of shares held by them at the time of such surrender, so that each holder of four shares of preferred capital stock of the Cheshire Railroad Company shall receive in exchange therefor five shares of preferred capital stock of the consolidated company, so far as is practicable in full shares and for fractional parts of shares when necessary, such fractional parts to have no voting power nor to be entitled to a dividend as long as they remain fractions.

The Cheshire Railroad Company agrees, as part of the consideration of this contract, to deliver to the consolidated company as its property, three hun-

dred and eighty-six (386) shares of the common stock of the Cheshire Railroad Company. It is also understood and agreed that any claims of the holders of the common stock of the Cheshire Railroad Company, if any they may have, shall be assumed by the consolidated company, and that the Cheshire Railroad Company shall be indemnified and saved harmless therefrom. The consolidated company agrees upon demand to exchange one share of its preferred stock for two shares of said Cheshire common stock not owned or controlled by the Cheshire Railroad Company.

ART. 4. The preferred stock of the consolidated company, in preference to and priority over the common stock, shall be entitled to such semi-annual dividends as can be paid out of the profits of the corporation, not to exceed, however, four per cent per annum free of tax.

After the payment of the above dividends upon the preferred stock, to the amount of four per cent per annum in any one year, any balance of annual earnings which may be divided shall be applied to the payment of dividends upon the preferred and common stock, each share of preferred and common stock sharing equally in the additional dividends so declared and paid.

ART. 5. The common stock of the consolidated company shall have no voting power until it shall have received dividends for two consecutive years amounting to not less than four per cent per annum, excepting that it shall have the right to vote on an equality with the preferred stock upon any question of issuing more preferred or common stock, and also upon any question of leasing any part of the consolidated road, or of hiring or uniting with any other road.

ART. 6. The by-laws of the present Fitchburg Railroad Company, except so far as the same may be inconsistent with this agreement, or with the provisions of law, shall constitute the by-laws of the consolidated corporation until legally changed, and the directors, officers, and agents of the present Fitchburg Railroad Company shall constitute the directors, officers, and agents of the consolidated corporation until others are duly chosen or appointed in their place, excepting that William A. Russell, of Lawrence, Massachusetts, and Edward C. Thayer, of Keene, New Hampshire, shall, upon said consolidation, be and become members of the board of directors of the consolidated company, and so remain until others are chosen in their place.

ART. 7. The railroad of the Cheshire Railroad Company, with all the lands embraced in its location, all its lands covered by tracks or used for the purpose of operating its railroad (except the Eagle Hotel land, and the Field land, so called, in Keene), its station buildings, storehouses, machine-shops, tanks, and all other railroad buildings and structures, together with the furniture, machinery, and tools of said last-named company, is to be and become the property of the consolidated corporation, together with all the rolling stock and equipment, of every kind and nature; also the farm property at and near Cold River station, the coal dump at Keene, with the land covered thereby and the tracks connected therewith, and all the land lying north of the railroad track in Keene, excepting the brick storehouse and lot, said lot being fifty-two feet front on Main street and one hundred feet in depth, together with the restrictions connected with the same. All other real estate now owned by the Cheshire Railroad Company shall remain the property of said last-named company, and shall not be included in this consolidation.

The notes of seventy-five thousand dollars ($75,000) given by the Canada Atlantic Railroad Company to the Cheshire Railroad Company shall be indorsed "without recourse" to the indorser, to the consolidated company, which shall pay therefor to the Cheshire Railroad Company the face of said notes and interest thereon.

ART. 8. All bonds for the payment of money, railroad stocks (except said Cheshire Railroad common stock), notes, accounts, account-books, papers,

office furniture in the passenger station at Keene, and other treasury assets belonging to the Cheshire Railroad Company at the time of said consolidation, together with all the real estate not herein declared, to be and become the property of the consolidated company, are to be reserved by the Cheshire Railroad Company for the use of its stockholders, except as is herein otherwise provided, excepting also the sum of twelve thousand five hundred dollars ($12,500), which sum is to be paid to the consolidated company at the time of said consolidation, in consideration of the assumption by the consolidated company of claims arising under leases and contracts referred to in articles nine and ten of this agreement. Said sum of twelve thousand five hundred dollars ($12,500) shall, in any event, remain the property of the consolidated company, and no part thereof shall be refunded to the said Cheshire Railroad Company.

ART. 9. This agreement is made subject to all existing leases, agreements, and contracts by and between either of the railroad companies hereby consolidated and other railroad companies, all of which are to be assumed and carried out by the consolidated company, and the Cheshire Railroad Company is to be held harmless from any and all claims or demands of every kind or nature which have arisen or may arise thereunder, and from any loss arising therefrom, and from any action or cause of action based upon such leases, agreements, and contracts, including all leases, contracts, and agreements to and with the Fitchburg Railroad Company, the Vermont & Massachusetts Railroad Company, the Canada Atlantic Railroad Company, the American Telegraph Company, the American Express Company, or any or either of them, and any and all other agreements and contracts if any such there be.

ART. 10. The consolidated company shall assume and pay at maturity the bonded debt of the Cheshire Railroad Company in the sum of nine hundred thousand dollars ($900,000). The Cheshire Railroad Company shall pay all interest due or accrued on said nine hundred thousand dollars ($900,000) at the date of consolidation, and also interest on said bonds to the date of consolidation whether then due and accrued or not. All other bonds, notes, rents, and bills for merchandise of any kind, and all claims for damages to persons or property incurred before the date of consolidation, and wages due employés, are to be paid by the Cheshire Railroad Company. All balances accruing in the daily interchange of business up to the date of consolidation are to be settled by the Cheshire Railroad Company, in the same manner as such settlements have heretofore been made. All other claims arising from the interchange of traffic, which are not in the regular course of business adjusted prior to the date of consolidation, shall be settled and paid by the consolidated company, but the Cheshire Railroad Company shall use all due diligence in settling and paying said claims before the date of consolidation.

ART. 11. The capital stock of the Monadnock Railroad Company owned by the Cheshire Railroad Company amounting to nine hundred and seventy-five (975) shares, shall be transferred to the consolidated company, and the last-named company shall give in payment therefor to the Cheshire Railroad Company nine hundred and seventy-five (975) shares of the preferred stock of the consolidated company.

ART. 12. All supplies of the Cheshire Railroad Company on hand upon said first day of October, A. D. 1890, such as coal, wood, oil, waste, and supplies for repairs of rolling stock, roadbed, tracks, stations, and bridges shall be purchased and paid for in cash, at their market value, by the consolidated company, the same to be appraised by two persons severally chosen by said companies respectively. In case of disagreement, said persons are to call in a third person to settle the same, whose decision shall be final and binding.

ART. 13. Nothing in this agreement shall be construed to deprive any minority stockholder in either of the said existing companies, parties hereto, of any rights to which they may now or hereafter be entitled according to law.

ART. 14. Whenever the said consolidation shall have been effected under the provisions of this agreement each of said railroad companies, parties hereto, shall continue only for the purpose of perfecting said consolidation, of preserving the rights of all creditors and liens upon property, of collecting, disposing of, and dividing the proceeds of the assets and property of the Cheshire Railroad Company, which by the terms of this agreement are to remain the property of said last-named company, and of closing up the outstanding affairs of each of the old corporations.

It is hereby agreed that all instruments for further assurance which are or may become necessary for fulfilling the obligations of either party hereto under this agreement, shall be executed upon reasonable request.

ART. 15. In witness whereof the directors of the Fitchburg Railroad Company and the directors of the Cheshire Railroad Company have executed these presents and affixed the corporate seal of each company on this third day of September, A. D. 1890.

[Seal.]

H. S. MARCY,
FRANCIS SMITH,
ROBERT CODMAN,
C. T. CROCKER,
WILLIAM H. HOLLISTER,
GEORGE HEYWOOD,
FREDERICK L. AMES,
J. Q. ADAMS,
JAMES RENFREW, JR.,
DAVID P. KIMBALL,
RODNEY WALLACE,
Directors of the Fitchburg Railroad Company.

[Seal.]

WILLIAM A. RUSSELL,
EDWARD C. THAYER,
H. W. SUTER,
GEORGE W. RUSSELL,
WILLIAM H. HILL,
A. N. BURBANK,
D. C. BALL,
Directors of the Cheshire Railroad Company.

BOSTON, November 14, 1890.

The following is a true copy of an extract from the records of a meeting of the stockholders of the Fitchburg Railroad Company, held at Boston, Mass., on the twenty-fourth day of September, 1890:

Voted, That the meeting proceed to vote to ratify, adopt, and confirm the agreement entered into by the directors of the Fitchburg Railroad Company and of the Cheshire Railroad Company bearing date September 3, 1890, for the consolidation of said companies and the railroads of the same, and that a committee of three be appointed by the chair to receive, assort, and count the ballots cast for that purpose.

The committee report the whole number of votes cast on the question of consolidation, 139,144; yes, 139,116, no, 28.

The president then declared the agreement for the consolidation of the Fitchburg and Cheshire Railroad Companies to be adopted, ratified, and confirmed.

Attest: THOMAS WHITTEMORE,
Corporation Clerk.

At a meeting of the stockholders of the Cheshire Railroad Company, held at Keene, N. H., on the eighteenth day of September, 1890, the following vote was unanimously passed:

Voted, That we, the stockholders of the Cheshire Railroad Company, hereby unite and consolidate with the Fitchburg Railroad Company so as to constitute one corporation under the name of the Fitchburg Railroad Company, all as authorized by chapter 257 of the acts of the State of New Hampshire for the year of 1887, and chapter 389 of the acts of the State of Massachusetts for the year 1887, by virtue of said acts and all other acts of each of said States as hereunto enabling, hereby approve, ratify, and adopt the contract executed by the directors of this company and of said Fitchburg Railroad Company of date September 3, 1890, and this day presented and read to us, the stockholders of this company, and on file with the clerk of this company, carrying out the union and consolidation authorized by said acts in all its terms and conditions. And that the president of this company and any successor of him in office, subject to the approval of a majority of the board of directors, is authorized and directed to execute and deliver all deeds and other contracts necessary or proper to effectually carry out said consolidation, and the provisions of said contract above named, and further to reduce to cash and properly distribute among the stockholders of this company entitled thereto all of its property and assets, which by the terms of the consolidation are not to go to the Fitchburg Railroad Company, and also do all things requisite to wind up the affairs of this company.

A true copy.

Attest: R. STEWART, *Clerk.*

LEASE

OF THE NORTHERN TO THE BOSTON & LOWELL RAILROAD COMPANY.

This indenture, made the thirtieth day of December, A. D. 1889, between the Northern Railroad, a corporation existing under the laws of the State of New Hampshire, party of the first part, and the Boston & Lowell Railroad Corporation, a corporation existing under the laws of the Commonwealth of Massachusetts, and operating railroads within the State of New Hampshire, party of the second part:

Witnesseth, that the party of the first part, in consideration of the rent, covenants, and agreements hereinafter mentioned, to be paid, kept, and performed by the party of the second part, doth hereby grant, lease, and demise unto the party of the second part the following described property, to wit:

1. The railroad of the party of the first part, extending from Concord in the State of New Hampshire, to White River Junction in the State of Vermont, and the branch thereof to Bristol in the State of New Hampshire, together with the lands on which said railroad and branch are located, or which are connected with or appertain to the uses of the party of the first part, and are its property, and all rights, easements, franchises, and privileges appurtenant thereto, and all the turnouts, branch tracks, depot grounds, stations, superstructures, and fixtures belonging thereto or connected or used therewith, and

the lands on which the same are now situated, so far as the same are the property of the party of the first part, whether included in its location or not, and its cars and engines, and its shop and the machinery therein; reserving, however, to the party of the first part convenient offices in that portion of the passenger station at Concord which it now occupies, and in that portion of any new passenger staiton which may be constructed at Concord in place of the existing station during said term.

2. All its shares of the capital stock of the Concord & Claremont, N. H., Railroad, and of the Peterborough & Hillsborough Railroad, together with the right to vote upon the same and to receive to its own use any dividends thereon.

3. Its claim against the Concord & Claremont, N. H., Railroad, on book account, amounting, according to the books of the party of the first part, with interest to January 1, 1890, to four hundred and eleven thousand and eighty-three dollars and seventy-six cents, and its claim against the Peterborough & Hillsborough Railroad upon second mortgage bonds thereof, amounting at their face value, exclusive of interest, to sixty-five thousand dollars.

To have and to hold the same to the party of the second part for and during the term of ninety-nine (99) years, from and after the first day of January, in the year of our Lord one thousand eight hundred and ninety; the party of the second part yielding and paying unto the party of the first part the rent hereinafter mentioned, and keeping and performing all the covenants and agreements of the party of the second part hereinafter contained.

And in consideration of the foregoing, the party of the second part for itself and its successors and assigns hereby covenants and agrees with the party of the first part as follows, viz.:

First. It will pay to the party of the first part as rent in gold coin of the United States on the first days of January, April, July, and October in each year, during the first seven and one half years of said term, the sum of thirty-eight thousand three hundred and fifty-five dollars ($38,355), and during the remainder of said term the sum of forty-six thousand and twenty-six dollars ($46,026) on each of said days in each year, and will pay at the same rate for any portion of a quarter, all payments to be made at the office of the treasurer of the party of the first part, and the first payment to be made on the first day of April, A. D. 1890.

Second. It will pay all taxes, assessments, and charges whatsoever that may be imposed upon or payable by said party of the first part on account of its property, franchise, capital stock or otherwise, during said term, and three twelfths of any taxes, assessments, or charges which may be so imposed or payable for the year commencing April 1, A. D. 1889.

Third. It will keep such accounts of the business of the road of the party of the first part, and will make such reports thereof as may be required at any time by law to be kept and made, and will in the name and for the benefit of the party of the first part do and perform all things which may be required by law to be done and performed by the party of the first part, which hereby constitutes the party of the second part its agent and attorney for that purpose.

Fourth. It will at all times provide the directors and officers of the party of the first part with free transportation over any railroad operated by the lessee or by any assignee of the lessee, and will ask for them from corporations whose railroads connect points on its own system the same free transportation that it asks for its own directors. It will also provide the stockholders of the party of the first part with free transportation to and from annual and special meetings over all the aforesaid railroads.

Fifth. It assumes and will pay as a part of the consideration of this lease,

the interest coupons upon the existing first mortgage bonds of the Concord & Claremont, N. H., Railroad, which bonds amount to five hundred thousand dollars ($500,000), and also the interest upon the existing first mortgage bonds of the Peterborough & Hillsborough Railroad, which bonds amount to one hundred thousand dollars ($100,000). At the maturity of said bonds or of any bonds given in exchange for or renewal of them, or to provide means to pay them, it will furnish to the party of the first part the money required to pay them.

Sixth. It will not make any mortgage or create any incumbrance upon its road and franchise without first securing, as a lien thereon, the payment of the rent and the performance of the obligations reserved and created to the party of the first part in this lease, and it will not lease or attempt to transfer the possession or control of the road and property hereby demised without the written approval of the directors of the party of the first part, except as hereinafter provided in article twelfth.

Seventh. It will indemnify and save the party of the first part harmless against all loss, cost, damage, or liability caused by or arising out of the operation of its road by said party of the second part, or by reason of the neglect of the party of the first part or of the second part to operate said road as required by law.

Eighth. It will, at its own cost and expense, maintain, preserve, and keep the railroad, side tracks, station-houses, and all other buildings, appurtenances, turn-tables, fixtures, rolling stock, and equipment of the party of the first part in as good order and condition as the same now are, so that there shall be no depreciation in the same or in said railroad, or its location, superstructure, buildings, and permanent way at any time during said term, and will renew and keep said equipment and property good and in sufficient quantity and proper quality and condition to do the business upon its road at all times during the said term, and once a year, at the request of the party of the first part, it will furnish to it a complete and correct schedule and description of all the equipment and movable property of the party of the first part then in its possession or control, and deliver the same to any person appointed by the party of the first part to examine its road or property, and will provide such person with transportation and suitable facilities to enable him to make such examination. And if on such examination said road, its superstructure, equipment, or property, shall be found to be depreciated, insufficient, or unfit in quantity, quality, condition, or value to meet all the requirements of this indenture, said party of the second part shall make good such depreciation, and forthwith expend upon said railroad or property an amount necessary to restore it to its former condition, and if it does not do so the party of the first part may make such expenditure at the expense of the party of the second part, which hereby agrees to pay the amount thereof on demand.

Ninth. It will during the term of this lease operate said demised railroad according to all requirements of law, fulfilling all the duties and obligations of the party of the first part in relation thereto in the same manner as if said demised road remained in the possession and control of the party of the first part, and protect and save harmless the party of the first part against all actions or claims for injury to persons or property during said term by reason of any want of repair of said road and property or appurtenances, or any casualties of any kind, or any want of care or skill in the management of the same, or by reason of any defects therein, and will comply in all respects with the requirements of law in the same manner as if it were the proprietor of said railroad and property, and will not permit the party of the first part to be subjected to any payment, penalty, or forfeiture for violation of law in any respect, and at the expiration or earlier termination of this lease it will re-

turn said demised road and property, with all equipment thereof, to the party of the first part, in as good order and condition as the same now are, without diminution or depreciation in any respect; *provided, however*, that in case any additions or improvements to said railroad or property shall have been made by the party of the second part, at that time, with the written consent of the party of the first part, the same shall be paid for by the party of the first part, at the value thereof, at the time this lease shall expire or be terminated.

Tenth. It will at all times during the term of this lease keep the buildings, bridges, equipment, and other property of the party of the first part adequately insured against loss by fire, and will indemnify the party of the first part against, and will pay all losses, liabilities, or claims against it, growing out of damage by fire or steam from any locomotive engine on the road hereby demised.

Eleventh. It will not, except with the written consent of the directors of the party of the first part, sell or otherwise dispose of the stock of the Concord & Claremont, N. H., Railroad, or of the Peterborough & Hillsborough Railroad, or the second mortgage bonds and claims against said roads hereinbefore specified, nor enforce said claims by legal proceedings, and at the end or earlier termination of this lease, it will retransfer said stock and claims to the party of the first part, and will account to it for all moneys realized from such claims, without interest.

Twelfth. It will not assign this lease or underlet or part with the possession of the road and property hereby demised, or any part thereof, without the written consent of the directors of the party of the first part, except that by vote of its directors it will assign and convey all the property hereby leased to the Boston & Maine Railroad upon the execution and delivery by that corporation to the party of the first part hereto of a valid agreement to be jointly and severally liable to said party of the first part for the full performance of any and all of the covenants and agreements of the lessee in this lease.

Thirteenth. The shares of the capital stock of the Concord & Claremont, N. H., Railroad, and of the Peterborough & Hillsborough Railroad, owned by the party of the first part, and embraced within the terms of this lease, shall be held and used by the party of the second part for the purpose of maintaining the roads of said companies as practical extensions and branches of the road of the party of the first part hereby demised. The organizations of said corporations shall be preserved and all their duties to the public and the State performed, and no incumbrance shall be created or permitted upon said roads by the use of said shares, except that new mortgages thereon may be made to secure bonds which it is agreed may be issued for the purpose of paying the existing bonds mentioned in article fifth of this lease, at rates of interest not exceeding that borne by said existing bonds; their capital stock shall not be increased without the written consent of the directors of the party of the first part, and at the end or earlier termination of this lease, said stocks shall be retransferred and delivered to the party of the first part in such manner as to return to it the same interest in the present roads and property of said Concord & Claremont, N. H., Railroad, and Peterborough & Hillsborough Railroad, and in all improvements which may be made thereon, as they now represent in said roads and property. The party of the first part will from time to time execute and deliver all such necessary and proper transfers and proxies as the party of the second part may request, to enable the party of the second part to vote on the shares of stock of the above-named railroad companies or to collect any dividends thereon, or to otherwise use the same according to the true intent and purpose of this lease.

Fourteenth. It will pay to the party of the first part, at the office of its treasurer, the sum of twelve hundred and fifty dollars in gold coin of the United

States, quarterly, in each year during said term, to wit, on the first day of January, the first day of April, the first day of July, and the first day of October in each and every year, and at the same rate for any portion of a quarter, the first payment to be made on the first day of April, A. D. 1890, as and for the expense of preserving its organization, the party of the first part hereby agreeing that it will keep up and preserve its organization during said term.

Fifteenth. The party of the second part will indemnify and protect the party of the first part against all claims which may be made against it by stockholders who may dissent from this lease, and it will pay the claims of any such dissenting stockholders and the expenses of the proceedings to ascertain the amount thereof; and any stock, interest, or property right of a dissenting stockholder which may become the property of the party of the first part under such proceedings, shall upon such payment by the party of the second part be transferred to it by the party of the first part to be held and disposed of by the party of the second part for its own use and benefit.

This lease is made upon condition that in case of the breach of any of the covenants of the lessee herein contained, or in case the estate hereby created and vested in the lessee shall be taken from it by legal proceedings of any kind, or in case of default in any payment herein provided to be made by the party of the second part, for the period of sixty days after the same is due and payable, then the party of the first part, its successors or assigns, may enter upon and take full possession of the premises hereby demised, and all depots, shops, buildings, tracks, rolling stock, or other property added thereto, and may remove said lessee and all persons claiming under it from said premises and thereby determine the estate hereby granted, using whatever force may be necessary for that purpose, and the party of the second part agrees that it will not in such event hinder, delay, or prevent the entry of the party of the first part to recover the possession of said demised premises as of its former estate.

The party of the second part also agrees that the demised premises and all books and accounts kept by it relating to the operation thereof, and the business, improvements, renewals, and repairs thereof, shall at all reasonable times be open to the inspection and examination of the directors or officers of the party of the first part, or of such person or persons as may be appointed by them, from time to time, to examine the same. The party of the second part also agrees that all the covenants and agreements in this instrument contained, to pay taxes, assessments, and charges upon the road and property of the party of the first part, to keep insurance upon said property, and to keep accounts, make reports, and perform all things required by law to be performed by the party of the first part, and to maintain and operate the road and property of the party of the first part, and to assume its contracts, and to indemnify said party against damage or expense, shall apply to and be binding upon the party of the second part in any control, maintenance, and operation of it, through control of their stock or otherwise, of the roads of the Concord & Claremont, N. H., Railroad, and the Peterborough & Hillsborough Railroad, or either of them, in the same manner and to the same extent that they apply to and are binding upon the party of the second part in the control, management, and operation of the road and property of the party of the first part.

The party of the second part also agrees that in case it shall fail to do and perform the matters and things herein agreed by it to be done and performed in payment of taxes, keeping accounts, and making reports required by law, keeping insurance, and maintaining and operating and managing the road and property hereby demised or otherwise, the party of the first part may do and perform the same at the expense of the party of the second part without prejudice to any remedies the party of the first part may have to enforce the

covenants and agreements of the party of the second part herein contained; and the party of the second part hereby assumes and will perform as its own, at its own expense, all existing contracts of the party of the first part for the transportation of persons or property.

The party of the first part, at the request of the party of the second part and upon being furnished by it with the requisite funds, will subscribe to and pay for such shares of the capital stock of the Franklin & Tilton Railroad as it may have authority to subscribe for, and will also upon the like request guarantee bonds of said Franklin & Tilton Railroad, and do all other acts and things in relation thereto for which it may have authority. After said subscription to said stock, the same shall be deemed to be property covered and demised by this lease, and all the provisions herein contained respecting the stock of the Concord & Claremont, N. H., Railroad, and of the Peterborough & Hillsborough Railroad, shall be deemed applicable to the stock of said Franklin & Tilton Railroad. The party of the second part will furnish the money to pay the bonds guaranteed as aforesaid at their maturity, or any bonds in renewal thereof, and will protect said party of the first part against said guaranty. And upon the expiration or earlier termination of this lease, the party of the second part will transfer and deliver to the party of the first part all its interest in the stock of said Franklin & Tilton Railroad and all its claim against it, and the party of the first part shall receive the same and pay the actual cost thereof without interest to the party of the second part.

The road and other property covered by this lease shall be appraised by two suitable persons chosen by the parties respectively, who, if they cannot agree, shall choose an umpire to act upon matters of difference only, and a schedule of said appraisal shall be attached to this indenture.

In witness whereof, the Boston & Lowell Railroad Corporation, by its president, and the Northern Railroad, by its president, the president of each of said companies being thereto duly authorized, have to this and one other instrument of even date and tenor herewith, signed their corporate names and affixed their corporate seals, the day and year first above mentioned.

[Seal.] NORTHERN RAILROAD,
By A. W. Sulloway, *President.*

[Seal.] THE BOSTON & LOWELL
RAILROAD CORPORATION,
By Francis L. Higginson, *President.*

In the presence of
J. H. Benton, Jr.,
Albert A. Gleason.

COMMONWEALTH OF MASSACHUSETTS.

Suffolk, ss. Boston, March 18, 1890. Then personally appeared Alvah W. Sulloway, president of the Northern Railroad, and acknowledged the above instrument to be the free act and deed of said Northern Railroad.

Before me,
J. H. Benton, Jr., *Justice of the Peace.*

COMMONWEALTH OF MASSACHUSETTS.

Suffolk, ss. Boston, March 19, 1890. Then personally appeared Francis L. Higginson, president of the Boston & Lowell Railroad Corporation, and acknowledged the above instrument to be the free act and deed of said Boston & Lowell Railroad Corporation.

Before me,
J. H. Benton, Jr., *Justice of the Peace.*

NORTHERN RAILROAD.

At a special meeting of the stockholders of the Northern Railroad, duly called and held at White's Opera House, in Concord, N. H., on the seventh day of December, 1889, to act upon the terms of a lease of the road and property of the corporation to the Boston & Lowell Railroad Corporation, upon terms agreed to by the directors of the two corporations, the following preamble and resolution were adopted by a stock vote of 8,660 shares, the whole number of votes cast being 9,212 shares:

"Whereas, the directors of the Northern Railroad and the directors of the Boston & Lowell Railroad Corporation have agreed upon the terms of a lease to the last named corporation of the road and property of the first-named corporation for the term of ninety-nine years from the first day of January, 1890, a copy of which lease has this day been read to the stockholders of this company present at this meeting and placed upon the records of the corporation:

"Now, therefore, the stockholders of the Northern Railroad do sanction and confirm said agreement and approve the terms of said lease, and hereby authorize the due execution and delivery thereof by the president of this corporation in the name and behalf of the corporation."

A true copy of the record.

WILLIAM L. FOSTER, *Clerk.*

BOSTON & LOWELL RAILROAD CORPORATION.

At a special meeting of the stockholders of the Boston & Lowell Railroad Corporation, held January 1, 1890, the following vote was passed:

Voted, That the stockholders hereby approve of a lease to this corporation of the railroad and certain other property of the Northern Railroad, on the terms and conditions set forth in an instrument, copy of which is hereto annexed and made part of this vote (being the foregoing lease).

The whole number of shares voted on was 36,054, all of which were in favor of the lease; the total number of shares of the capital stock being 55,294, the lease is approved by a majority of stockholders in interest.

Attest: C. E. CRAM, *Clerk.*

[Chapter 23.]

COMMONWEALTH OF MASSACHUSETTS.

IN THE YEAR ONE THOUSAND EIGHT HUNDRED AND NINETY.

An act to authorize the Boston & Maine Railroad to accept an assignment of a lease of the Northern Railroad to the Boston & Lowell Railroad Corporation.

Be it enacted by the Senate and House of Representatives in General Court assembled and by the authority of the same as follows:

SECTION 1. The Boston & Maine Railroad is hereby authorized to accept an assignment of the lease of the Northern Railroad to the Boston & Lowell Railroad Corporation, dated the thirtieth day of December, eighteen hundred

and eighty-nine, and to assume and perform the obligations and covenants thereof.

SECT. 2. This act shall take effect upon its passage.

HOUSE OF REPRESENTATIVES, February 7, 1890.

Passed to be enacted.

WILLIAM E. BARRETT, *Speaker.*

IN SENATE, February 11, 1890.

Passed to be enacted.

HENRY H. SPRAGUE, *President.*

FEBRUARY 12, 1890.

Approved.

JOHN Q. A. BRACKETT.

SECRETARY'S DEPARTMENT, BOSTON, February 25, 1890.

A true copy.

Witness the seal of the Commonwealth.

[Seal.] ISAAC H. EDGETT,

Deputy Secretary of the Commonwealth.

Indenture made this twenty-eighth day of February, A. D. 1890, by and between the Boston & Lowell Railroad Corporation, a corporation duly established under the laws of the Commonwealth of Massachusetts, party of the first part, and hereinafter called the Lowell Railroad, and the Boston & Maine Railroad, a corporation duly established under the laws of said Commonwealth, party of the second part, and hereinafter called the Maine Railroad.

Whereas, the said Lowell Railroad, by indenture bearing date the thirtieth day of December, 1889, has leased of the Northern Railroad, a corporation duly established under the laws of the State of New Hampshire, its railroad and other property, as in said indenture particularly described:

Now, therefore, these presents witness as follows, to wit:

1. The said Lowell Railroad, in consideration of the covenants of the said Maine Railroad hereinafter contained, hereby assigns, transfers, and sets over unto the said Maine Railroad the aforesaid lease, the premises and property hereby demised, and all right, title, and interest in or under the same;

To have and to hold the said premises and property for the residue of the term of said lease.

2. The said Maine Railroad hereby accepts the said transfer, assignment, and conveyance of said lease and of said demised premises and property, and covenants with the said Lowell Railroad that it will well and truly pay the rent reserved in said lease, and will perform all the covenants and stipulations in said lease contained to be performed on the part of said Lowell Railroad, and will indemnify and hold harmless the said Lowell Railroad against all losses, claims, or liabilities arising on account of said lease, and at the expiration of the term of the lease of said Lowell Railroad to said Maine Railroad, will cause the said lease of said Northern Railroad to enure to the benefit of the said Lowell Railroad.

3. Nothing herein contained shall in any way release or discharge the said Lowell Railroad from its liability to said Northern Railroad upon all the covenants of said lease.

In witness whereof the said parties have caused their respective corporate seals to be hereto affixed, and these presents to be executed by their respective presidents, thereunto duly authorized, the day and year hereinbefore written.

(Signed) THE BOSTON & LOWELL RAILROAD CORPORATION,

[Seal.] By FRANCIS L. HIGGINSON, *President.*

BOSTON & MAINE RAILROAD,

[Seal.] By FRANK JONES, *President.*

In the presence of
J. H. BENTON, JR.,
ALBERT A. GLEASON.

COMMONWEALTH OF MASSACHUSETTS.

SUFFOLK, SS. BOSTON, March 19, 1890. Then personally appeared Francis L. Higginson, president of the Boston & Lowell Railroad Corporation, and acknowledged the above instrument to be the free act and deed of said Boston & Lowell Railroad Corporation.

Before me,
J. H. BENTON, JR., *Justice of the Peace.*

Indenture made this twenty-eighth day of February, A. D. 1890, by and between the Boston & Maine Railroad, a corporation duly established under the laws of the Commonwealth of Massachusetts, and the Northern Railroad, a corporation duly established under the laws of the State of New Hampshire.

Whereas, by the terms of an indenture of lease of its railroad and other property from said Northern Railroad to the Boston & Lowell Railroad Corporation, dated December 30, A. D. 1889, it is provided that said Boston & Lowell Railroad Corporation will assign and convey the leased property to the said Boston & Maine Railroad, upon certain conditions in said indenture set forth:

Now, therefore, in compliance with said conditions, and in consideration of such transfer and conveyance herewith simultaneously made:

1. The said Boston & Maine Railroad hereby covenants with said Northern Railroad that it will be jointly and severally liable to said Northern Railroad for the full performance of each and all of the covenants and agreements of the said Boston & Lowell Railroad Corporation in the said indenture of lease contained.

2. The said Northern Railroad hereby accepts the foregoing covenants of said Boston & Maine Railroad as in full performance of the provisions of said lease relative to the assignment and conveyance of the leased property to the said Boston & Maine Railroad.

In witness whereof, the said parties have caused their respective corporate seals to be hereto affixed, and these presents to be executed by their respective presidents, thereunto duly authorized, the day and year hereinbefore written.

(Signed) BOSTON & MAINE RAILROAD,

[Seal.] By FRANK JONES, *President.*

NORTHERN RAILROAD,

[Seal.] By A. W. SULLOWAY, *President.*

LEASE

OF THE UPPER COOS RAILROAD, OF NEW HAMPSHIRE, TO MAINE CENTRAL RAILROAD COMPANY.

At an adjourned meeting of the stockholders of the Upper Coos Railroad, of New Hampshire, duly held at Portsmouth, on the 16th day of July, 1890, it appeared that all the stockholders were present, and among other things, the following matters there took place and were entered of record, namely:

Irving W. Drew then submitted the following resolution, viz.:

Resolved, That the lease in duplicate from this corporation to the Maine Central Railroad Company, bearing date from the first day of May, 1890, duly signed by George Van Dyke, president of this corporation, and by James P. Cook, its treasurer, is hereby accepted, ratified, and approved, and the treasurer of this corporation is authorized to deliver and exchange the same with the Maine Central Railroad Company, and to cause the same to be duly recorded.

On motion of said Irving W. Drew the above resolution was submitted to a stock vote, which, being duly taken, examined, and reported, was found to be as follows, viz.:

All the stockholders were present, but under the statutes, could only vote 2,380 shares: In favor of said resolution, 2,480 shares; against said resolution none.

The votes in favor of said resolution were found to be more than two thirds of the shares represented at this meeting, and being the entire number of shares of this corporation outstanding, so far as the same can be lawfully voted under the laws of New Hampshire, said resolution was unanimously passed by all the shareholders of this corporation and was so declared by the president.

On motion of said Drew:

Voted, That the president ask the approval of the stockholders *viva voce* of each of the votes passed at this meeting, including those accepting the leases from the Upper Coos Railroad of Vermont, and the Coos Valley Railroad Company accepting the lease to the Maine Central Railroad Company, and authorizing mortgages of the existing line of railway of this corporation and of the proposed extension thereof and the issue of the bonds secured by said mortgages and the discharge of the existing mortgage.

Thereupon the president called on each stockholder by name in succession to answer in the affirmative in the event he approved of the foregoing votes; otherwise to answer in the negative.

The following stockholders answered in the affirmative, viz.:

FRANK JONES,
GEORGE VAN DYKE,
JAMES P. COOK,
CHARLES HOWARD,
ENOCH G. SWEATT,
GEORGE W. ARMSTRONG,
IRVING W. DREW,
PAYSON TUCKER (CHARLES A. SINCLAIR'S PROXY),

being all the stockholders of the corporation.

Thereupon it was declared by the president that all of the votes passed at this meeting, as aforesaid, were approved by every stockholder of the corporation answering *viva voce*.

A true copy from the stockholder's records of the Upper Coos Railroad of New Hampshire.

Attest: C. B. JORDAN,
Clerk of said Corporation.

LANCASTER, NEW HAMPSHIRE, July 31, 1890.

MAINE CENTRAL RAILROAD COMPANY,
IN BOARD OF DIRECTORS,
August 28, 1890.

On motion of Mr. Davis:

Voted, That the execution by the president and treasurer of the lease of the Upper Coos Railroad, in New Hampshire, dated the first day of May, in the year eighteen hundred and ninety, and the execution by the president of the contract with Messrs. Charles A. Sinclair, George Van Dyke, and W. B. Ives, for the construction of the extension of the Upper Coos Railroad, dated the sixteenth day of July, eighteen hundred and ninety, and the letter of the president concerning the same to Messrs. Sinclair, Van Dyke, and Ives, dated said sixteenth day of July, are all hereby ratified and confirmed.

A true copy of record.

Attest: JOSIAH H. DRUMMOND, *Clerk.*

This indenture made in duplicate this first day of May, eighteen hundred ninety, by and between the Upper Coos Railroad, a corporation existing under the laws of New Hampshire, party of the first part, and with its successors and assigns hereinafter styled the lessor, and the Maine Central Railroad Company, a corporation existing under the laws of Maine, party of the second part, and with its successors and assigns hereinafter styled the lessee, witnesseth:

ARTICLE 1. In consideration of the rent and covenants herein reserved to be paid and performed by the lessee, said Upper Coos Railroad does hereby demise and lease to said Maine Central Railroad Company, all the railroad of the lessor located and constructed in New Hampshire and Vermont, commencing at or near the boundary line between Vermont and Canada, and running southerly through the town of Canaan and thence into New Hampshire, and through New Hampshire to its southern terminus in the town of Stratford.

Also all its leasehold interests under and by virtue of the lease from the Upper Coos Railroad, a corporation existing under the laws of Vermont, dated said first day of May, eighteen hundred ninety, and attached hereto, marked "Exhibit A."

Also all its leasehold interests under and by virtue of the lease from the Coos Valley Railroad Company, a corporation existing under the laws of Vermont, bearing date said first day of May, and hereto attached, marked "Exhibit B."

Also all its right, titles, and interests in and to the railroad or railroads constructed or to be constructed, franchises, and other property of said Upper Coos Railroad of Vermont and of said Coos Valley Railroad Company.

Also all rights of the lessor by lease or contract in and to any and all railroads whatsoever.

Also all its rights to connect with, lease, operate, purchase, or otherwise control, or to co-operate with any other railroad or other railroad corporation.

Also the franchises and rights of the lessor to extend its railroads southerly from its present southern terminus, or to make any other extensions thereof, and to construct, operate, and maintain any railroads whatsoever.

Also its rights to take tolls, its franchises, rights of way, side tracks, branches stations, station grounds, bridges, rolling stock, equipment, tools, machinery, materials, supplies, and all other property whatsoever in any way appurtenant to the foregoing railroads, constructed or to be constructed, or any of them, and all other property, rights, exemptions, and privileges whatsoever belonging to the lessor on said first day of May, except monies at that time on hand or due it.

A schedule of all said rolling-stock and equipment, and of the general condition of the leased property, signed by the respective officers of the parties hereto, is attached marked "Exhibit C."

To have and to hold all the said railroad, property, franchises, rights, privileges, and all other of the premises hereby demised, with all the appurtenances thereof, to the lessee during the full term of nine hundred ninety-nine (999) years, commencing on said first day of May, eighteen hundred ninety.

Art. 2. The lessor hereby covenants and agrees with the lessee, that it, the lessor, has a good, lawful, and unincumbered title to the premises, including said leaseholds, except as herein otherwise set out, and that, subject to the conditions, reservations, and provisions herein set out, the lessee shall, during all the term aforesaid, peaceably and quietly have, hold, use, occupy, and enjoy all and singular the same, including said leased franchises and properties, without any molestation from or by the lessor, and without any lawful molestation from or by any other person or persons whatsoever.

And the lessor further covenants and agrees with the lessee, that it has acquired a lawful right of way for the portion of its railroad already constructed as aforesaid, and has done and performed everything required by law to enable it to lawfully maintain and operate the same.

And the lessor agrees with the lessee, that if the lessee is, notwithstanding, disturbed or molested in the enjoyment of any part of the demised premises, by reason of said covenants or agreements, or any of them, not being kept or performed by the lessor, the lessee may, and is hereby authorized, to quiet the title with reference thereto, as it reasonably can.

Art. 3. The lessee hereby covenants and agrees with the lessor, for and during the continuance of this lease, that it will perform all things to be done by the lessor according to the terms of said leases from said Upper Coos Railroad in Vermont and from said Coos Valley Railroad Company, and will relieve the lessor from all liability thereunder; that it will duly and seasonably pay and discharge all taxes and other burdens which may be assessed on any or all of the demised premises; thnt it will indemnify and save harmless the lessor from all suits, damages, and costs for any act done or omitted by the lessee or for anything arising out of the demised premises in connection with the use, possession, or operation thereof; that it will make all returns required by law to be made by the lessee, and will furnish the lessor with all statements to enable it to make all returns required by law of the lessor; and that it will, whenever requested, furnish the directors, secretary, treasurer, and other officers of the lessor, and such experts as may reasonably be selected by the lessor, with free passes annually or oftener, for the purpose of enabling the lessor to cause the demised premises to be duly inspected from time to time as it may desire.

Art. 4. The lessee further agrees with the lessor, that, during the continuance of this lease, it will maintain and operate the demised premises in furtherance of the objects contemplated by all the laws affecting the same, and so as to promote the public convenience, and will maintain the same in good and substantial repair and condition, and will from time to time make such alterations, improvements, and enlargements thereof as may be useful for the safe, convenient, and regular transportation of passengers, freight, and mails upon every part of the line; and

that it will, at the termination of this lease, surrender the same in as good order and condition as they were at the inception hereof, with all additions thereto and improvements thereof.

ART. 5. And the lessee further covenants and agrees to and with the lessor, that it will during all the term aforesaid pay as rent for the premises, at the rate of thirty-five thousand, five hundred (35,500) dollars annually, in semi-annual installments, on the first days of November and May in each year, at the principal office of the lessee, except as herein otherwise provided.

Whereas the lessor proposes to issue its mortgage bonds of even date herewith, for the principal sum of three hundred and fifty thousand (350,000) dollars, payable in forty (40) years from date, and bearing interest at the rate of four (4) per cent per annum, payable semi-annually: —

Now, therefore, the lessee agrees to guaranty, by proper indorsement on each of said bonds, payment of the principal and interest thereof to the holder of the same, as the same respectively come due.

Provided, however, that, before such guaranty shall be indorsed as aforesaid, the lessor shall secure said bonds by a mortgage of its existing railroad as aforesaid, with a good, lawful, and clear title, free of all prior incumbrances.

And lessee further agrees with lessor, that it will unite with the lessor in renewing at not exceeding said rate of interest of four (4) per cent per annum, the whole or any portion of the principal of said bonds when the same fall due, and in renewing such renewals, and so on continuously, so long as this lease may endure, and that it will guaranty the payment of the principal and interest of such renewals, and each of them, by indorsement as aforesaid; provided that such renewals and each of them shall be secured by a mortgage on said existing railroad, with a good, lawful, and clear title, free of all prior incumbrances, and the lessor shall have the benefit of any reduction of interest. And the lessee will join in the mortgage or mortgages securing the same, so far as is necessary to give to the same priority over the leasehold interest hereunder.

The lessor reserves the right to execute said mortgages to secure the payment of said bonds and the renewals thereof, which said mortgages shall have rank, priority, and privilege before this lease; and all the premises are leased subject to the incumbrance to be created by the said mortgages and the conditions thereof.

From the portion of said rental in excess of coupons to be so guaranteed by the lessee, there shall be paid semi-annually at the dates aforesaid two hundred and fifty (250) dollars to the treasurer of the lessor at the principal office of the lessee; and the balance, at present, ten thousand, five hundred (10,500) dollars each half-year, shall be paid as follows: On or before the twenty-fifth days of October and April in each year the treasurer of the lessor shall furnish the lessee a list of the shareholders of the lessor, showing the address of each and the portion of said ten thousand, five hundred (10,500) dollars to which each is entitled; and the lessee shall thereupon, on said first days of November and May in each year, pay said ten thousand, five hundred (10,500) dollars by forwarding the check of the lessee to each person named on said list, to the address given therein and for the amount therein set out as payable to him, and upon said checks being duly honored, the payments so made in accordance with such lists shall be in full discharge of the semi-annual rentals hereinbefore agreed to be paid.

And, whereas, further, the lessee may construct the extension of said railroad from its present southern terminus in Stratford at its junction with the Grand Trunk Railway to a connection with the line of the lessee in the towns of Dalton, Whitefield, or Carroll, partly in New Hampshire and partly in Vermont, or wholly in either, being thirty-three (33) miles or thereabouts, and may further equip the whole line: —

Now, therefore, the lessor covenants and agrees with the lessee, that it will, on the request of the lessee, execute its bonds, bearing such date as the lessee may

desire, payable in forty (40) years from date, with interest at the rate of four and one half (4½) per cent per annum, payable semi-annually, to the principal amount of not over twenty-one thousand (21,000) dollars per mile for each mile of said extension, whether in New Hampshire or Vermont, and will secure the same by a first mortgage covering the extension aforesaid, whether in said New Hampshire or Vermont, including all interests which the lessor has acquired, or may acquire, by lease or otherwise, in and to any portion of the line aforesaid in Vermont, and will deliver said bonds to the lessee as requested by it, to be used for the purposes aforesaid; and further, that it will on request from time to time renew the principal of any of said bonds, on such time as the lessee may desire, and renew any such renewals, or any part thereof, and so on continuously so long as this lease endures, and will secure such renewals, and each of them, in the same manner as it secures the original bonds to be issued as hereinbefore provided.

The lessee will pay at its own cost all said bonds so to be issued on the extension aforesaid, and the renewals thereof and the interest on all the same and all expenses with reference thereto; and it will hold the lessor harmless from all loss, damage, or expense arising out of the same.

In the event that it shall be doubted whether the lessor can lawfully issue said bonds for the full amount of twenty-one thousand (21,000) dollars per mile of said extension, then the lessor will, in lieu of the whole or part thereof, issue its capital stock to the contractors, or other persons, as from time to time may be requested by the lessee, said stock and bonds not to exceed said rate of twenty-one thousand (21,000) dollars per mile of extension constructed, the lessee to guarantee thereon perpetual dividends at the rate of four and one half per cent per annum, and the holders thereof to receive no other dividends, which said dividends shall be paid at the cost and expense of the lessee; and for the purpose of giving effect hereto, agreements signed by the lessee shall be indorsed on each certificate of stock to be issued as aforesaid, and on each successive certificate thereafter issued on surrender or transfer.

Provided, however, that whenever hereafter the full amount of said bonds may be lawfully issued, the lessee, and also any person holding any of said stock, shall each have the right to take up or surrender any of said stock in exchange for said bonds, par for par, with due adjustment of interest at said rate of four and one half (4½) per cent; and thereupon the stock taken up or surrendered shall be extinguished.

Art. 6. This lease is upon condition that, if the lessee shall fail to pay any rent for six months after the same becomes payable and payment thereof is demanded in writing, or shall fail to perform any of its agreements herein, and shall, for six months after notice or demand in writing to the contrary given by the lessor, continue such default and fail to make good all the same, with lawful interest, damages, and expenses as hereinafter set out, then and in either event the lessee shall be liable to suffer the forfeiture of this lease.

And thereupon the lessor into and upon all the demised premises, or into and upon any part thereof for and in the name of the whole, shall have the right at any time thereafter to enter, and take and hold possession of the same, and use and operate the same, and take the income and proceeds thereof, and the lessee, and all its servants and agents, to dispossess and remove, and may at the time of such entry, or at any time thereafter, give written notice that it holds the same for the purpose of effecting the determination of this lease and enforcing the forfeiture thereof, for the specified breach or breaches of covenant or agreement for which such entry was made.

Any written notice or demand as aforesaid shall be sufficient, if delivered by authority of the directors of the lessor to the president or treasurer of the lessee, or if published once a week for two weeks in some public daily journal in the city of Portland, State of Maine, or in the city of Boston, State of Massachusetts.

If the lessee shall not within three months after the delivery of notice or the last publication thereof as aforesaid, repair, supply, and make good all the deficiency and breach of covenant or agreement for which such entry was made, with lawful interest and all damages and expenses caused thereby, all the estate, rights, and interests of the lessee shall be absolutely determined, and the lessor shall have and hold all the demised premises and the income thereof, as in and of its former estate and to its own use.

But if the lessee, at any time after such entry for breach of covenant and before the expiration of three months as aforesaid from the delivery or the publication of notice aforesaid, repair, supply, and make good all the deficiency or breach of covenant or agreement for which such entry was made, with interest as aforesaid, and with all damages and expenses in anywise caused thereby, then the lessee shall be restored to the possession, use, and enjoyment of all the demised premises as fully and amply, to all intents and purposes, as if no such deficiency or breach of covenant had occurred, and the lessor shall restore and yield possession as aforesaid, and account for and pay to the lessee all the net profits and income received by the lessor by virtue of its entry and possession aforesaid.

In case of default or omission by the lessee to comply with any of the agreements, covenants, or provisions hereof, and if said default or omission is of such character that it cannot be made specifically good, the lessee shall have the right, within the periods hereinbefore set out, to pay or perform a pecuniary consideration the equivalent thereof, or as nearly equivalent as is practicable from the nature of the case; and, in the event of any real controversy arising whether or not the pecuniary matter made or offered to be made by the lessee was such equivalent, the lessee shall be entitled to redeem from said omission or default within such period of three months after the time of the final adjudication concerning said controversy by the court having jurisdiction thereof, by then making such other pecuniary payment or performance as shall then appear to be an equivalent as aforesaid, making at the same time full compensation for consequent loss of interest, damages, and expense, including counsel fees connected with or arising out of said adjudication.

Provided, nevertheless, that nothing herein contained shall be construed as diminishing any right or remedy which either the lessor or lessee, or any other party in interest herein, would have at law, or in equity, to enforce the performance of any covenants or agreements herein set forth, or to recover damages resulting from any omission or default in reference to the same or either of them, or as preventing either from recovering on account thereof any balance to which it is justly entitled.

Art. 7. The lessor further covenants and agrees with the lessee that, during the continuance of this lease, it will at its own expense maintain a lawful and beneficial corporate organization, make all returns and do all other things on its part required to be done to uphold and save inviolate the demised premises, and will at its own expense elect and appoint all the officers, agents, or servants required or convenient for the purposes hereof, and will invest them with such powers and duties as may be incidental thereto; that it will at the cost of the lessee make any further assurances which from time to time may be found useful to secure to the lessee all rights, powers, and privileges under this lease according to its true intent; that it will, at the cost of the lessee, from time to time authorize and execute any conveyance of property which, under the terms hereof, the lessee is authorized to sell or otherwise dispose of; that it will, at the cost of the lessee, do any other act which may be necessary or convenient to enable the lessee to exercise any of the rights, powers, and privileges hereby demised, or intended to be demised; and especially that it will, at the cost of the lessee, make all locations, commence and prosecute or defend all proceedings before any courts or other judicial tribunals, or official boards, commissioners, and any officials whatever, make all petitions and other applications, and answers, pleas, or

other defenses, commence and enter all appeals and other acts and things necessary, proper, or convenient with reference to any of the same, and as incident thereto execute all appropriate bonds and other instruments; and the lessee herewith covenants and agrees with the lessor to hold the lessor harmless from all loss, damage, or expense by reason of anything aforesaid to be done at the cost of the lessee.

ART. 8. The lessee may, from time to time, amend, repair, alter, or replace any of the buildings, rails, equipment, or other appurtenances of the railroad hereby leased, or of any extension thereof; so, however, that in all such cases, and the lessee hereby covenants that in all such cases there shall forthwith be made substitutions, additions, or improvements of the like kind and for the like purposes, which shall be full equivalents in all respects.

And the lessee may, from time to time, cause to be made and provided new and additional buildings, tracks, rails, equipment, or other appurtenances, necessary or beneficial for the purposes of the demised property, and also such changes of location as may be so necessary or beneficial, but not so as to divert the same substantially from the existing route, nor to impair the value of any part thereof.

The lessee may, from time to time, sell and otherwise dispose of lands, rolling stock, equipments, or other property, which are now or which may hereafter become subject to this lease and which may have become unnecessary for the purposes of the demised property, taking, however, such action as may be necessary or proper to secure the application of the proceeds thereof to its improvement.

All rolling stock and equipment substituted as herein provided shall be properly marked to identify the same; and such other acts shall be done by the lessee as may be necessary or proper to give said new rolling stock and equipment the same status under this lease as that which it replaces.

All lands and other hereditaments which may hereafter be acquired as appurtenant to the demised property, whether in substitution or in improvements or additions, shall be so taken as to be held subject to the terms hereof; and said lessee covenants that it will, from time to time, make all such assurances of title as may be advised by counsel to be needful or proper to give full effect to this agreement.

In testimony whereof the said Upper Coos Railroad has caused these presents to be subscribed by its president and countersigned by its treasurer and its corporate seal affixed, and the said Maine Central Railroad Company has caused these presents to be subscribed by its president and countersigned by its treasurer and its corporate seal affixed, the day and year first above written.

UPPER COOS RAILROAD,
[L. S.] BY GEORGE VAN DYKE, *Its President.*
Countersigned by
JAMES P. COOK, *Its Treasurer.*

MAINE CENTRAL RAILROAD COMPANY,
[L. S.] BY ARTHUR SEWALL, *Its President.*
Conntersigned by
J. A. LINSCOTT, *Its Treasurer.*
Signed, sealed, and delivered in presence of
DANIEL BROOKS, } To ARTHUR SEWALL and
WILLIAM L. PUTNAM, } J. A. LINSCOTT.

STATE OF NEW HAMPSHIRE.

ROCKINGHAM SS. July 16, A. D. 1891. Then personally appeared George Van Dyke, in his capacity of president of the Upper Coos Railroad, and acknowledged

the foregoing instrument by him signed to be the free act and deed of said corporation.

Before me,
CHESTER B. JORDAN,
Justice of the Peace for said County and State.

STATE OF MAINE.

CUMBERLAND SS. August 28, A. D. 1890. Then personally appeared Arthur Sewall, in his capacity of president of the Maine Central Railroad Company, and acknowledged the foregoing instrument by him signed to be the free act and deed of said corporation.

Before me,
DANIEL BROOKS,
Justice of the Peace for said County of Cumberland.

EXHIBIT A.

This indenture made in duplicate this first day of May, eighteen hundred and ninety, by and between the Upper Coos Railroad, a corporation existing under the laws of Vermont, party of the first part, and with its successors and assigns hereinafter styled the lessor, and the Upper Coos Railroad, a corporation existing under the laws of New Hampshire, party of the second part, and with its successors and assigns hereinafter styled the lessee, witnesseth:

ARTICLE 1. In consideration of the covenants herein reserved to be paid and performed by the lessee, the lessor does hereby demise and lease to the lessee all the railroad of the lessor constructed or to be constructed in Vermont.

Also all its rights, if any such it has, to connect with, lease, operate, purchase, or otherwise control, or to co-operate with any other railroad or other railroad corporation.

Also the franchises and rights of the lessor to extend its railroad and to construct, operate, and maintain any railroads whatsoever.

Also its rights to take tolls, its franchises, rights of way, side tracks, branches, stations, station grounds, bridges, and all other property whatsoever in any way appurtenant to the foregoing railroad, constructed or to be constructed, and all other property, rights, exemptions, and privileges whatsoever belonging to the lessor on said first day of May.

To have and to hold all the said railroad, property, franchises, rights, privileges, and all other of the premises hereby demised, with all the appurtenances thereof, to the lessee during the full term of nine hundred ninety-nine (999) years, commencing on said first day of May.

ART. 2. The lessee hereby covenants and agrees with the lessor, for and during the continuance of this lease, that it will duly and seasonably pay and discharge all taxes and other burdens which may be assessed on any or all of the demised premises; that it will indemnify and save harmless the lessor from all suits, damages, and costs for any act done or omitted by the lessee, or for anything arising out of the demised premises in connection with the use, possession, or operation thereof; that it will duly make all returns required by law to be made by the lessee, and will furnish the lessor with all statements to enable it to make all returns required by law of the lessor; that it will maintain and operate the demised premises in furtherance of the objects contemplated by all the laws, general and special, affecting the same, and in such manner as to promote the public convenience and

advantage under said laws, and will from time to time make such alterations, improvements, and enlargements of said railroad and its appurtenances, as may be useful for the safe, convenient, and regular transportation of passengers, freight, and mails upon all and every part of the line ; that it will, at the termination of this lease, surrender the demised premises, with all additions thereto and improvements thereof ; and that it will pay as rent for the premises and in full therefor one dollar at the end of said term.

ART. 3. And whereas in the construction of the railroad of the lessor, or in the construction of the extensions or branches thereof, whether now authorized or hereafter authorized, or in equipping the same or any portion thereof, or in refunding the cost of the premises or any portion thereof, or in providing for any other matter or thing for which the lessor may now lawfully issue its obligations secured by mortgage, or may hereafter be authorized so to do, the lessee may need to use such obligations.

Now, therefore, the lessor covenants and agrees with the lessee, that it will from time to time, on request of the lessee, unite with it in issuing its obligations, secured by mortgage as aforesaid, for such amounts and on such terms and with such other particulars as the lessee may from time to time request.

And in consideration thereof the lessee agrees that it will pay and discharge at its own cost all said obligations so to be issued as aforesaid, and the interest thereon, and all renewals thereof with interest thereon, and all costs, charges, or expenses with reference thereto ; and that it will hold the lessor harmless from all loss arising out of the same.

And whereas by virtue of the caption of this lease all parts hereof in which either the word "lessor" or the word "lessee" is used, apply, not only to the lessor or lessee, but to its successors and assigns respectively, yet in order that the matter may be plainly stated, and without impairing the general rule of interpretation hereof, it is expressly agreed by and between the lessor and lessee, that all the provisions of this article with reference to the issuing of obligations and execution of mortgages to secure the same, shall operate between the successors and assigns of either the lessee or the lessor on the one side, and the lessor or lessee, or successors of either as the case may be, on the other side; so that the successors and assigns of the lessee shall have all the benefits hereof and be entitled to demand and receive the issue of obligations and execution of mortgages as aforesaid, and the successors and assigns of the lessor shall be entitled to the benefit of the agreements herein by the lessee for payment and discharge, and of all other agreements herein for things to be done by the lessee.

ART. 4. It is expressly agreed between the parties hereto, that no failure on the part of the lessee to perform any of the matters and things herein covenanted or agreed to be done by it, nor any other matter or thing shall cause a forfeiture of this lease, and that the only remedy hereunder, by either the lessor or lessee as against the other, shall be at law or in equity to enforce the performance of covenants and agreements herein set forth, or to recover damages resulting from some omission or default with reference thereto.

ART. 5. The lessor further covenants and agrees with the lessee that, during the continuance of this lease, it will maintain a lawful and beneficial corporate organization, make all returns and do all other things on its part required to be done to uphold and save inviolate the demised premises ; that it will elect and appoint all the officers, agents, or servants required or convenient for the purposes hereof, and invest them with such powers and duties as may be incidental thereto ; that it will make any further assessments which from time to time may be found useful to secure to the lessee all rights, powers, and privileges under this lease according to its true intent ; that it will from time to time authorize and execute any conveyance of property which, under the terms hereof, the lessee is authorized to sell or otherwise dispose of ; that it will do any other act which may be necessary or convenient to enable the lessee to exercise any of the rights, powers, and privileges

hereby demised, or intended to be demised ; and especially that it will make all locations, commence and prosecute or defend all proceedings before any courts or other judicial tribunals, or official boards, commissioners, and any officials whatever, make all petitions and other applications, and answers, pleas, or other defences, commence and enter all appeals and other acts and things necessary, proper, or convenient with reference to any of the same, and as incident thereto execute all appropriate bonds and other instruments ; and the lessee herewith covenants and agrees with the lessor to hold the lessor harmless from all loss, damage, or expense by reason of anything in this article contained, and to pay all the cost thereof.

ART. 6. The lessee may, from time to time, amend, repair, alter, or replace any of the buildings, tracks, rails, equipment, or other appurtenances of the railroad leased, or of any extension thereof, and may from time to time cause to be made and provided new and additional buildings, tracks, rails, equipment, or other appurtenances necessary or beneficial for the purposes of the demised property, and also such changes of location as may be so necessary or beneficial, and may, from time to time, sell and otherwise dispose of lands, rolling stock, equipments, or other property, which are now or which may hereafter become subject to this lease.

In testimony whereof the said Upper Coos Railroad of Vermont has caused these presents to be subscribed by its president and countersigned by its treasurer and its corporate seal affixed, and the said Upper Coos Railroad of New Hampshire has caused these presents to be subscribed by its president and countersigned by its treasurer and its corporate seal affixed, the day and year first above written.

UPPER COOS RAILROAD OF VERMONT,
[L. S.] BY GEORGE VAN DYKE, *Its President.*
Countersigned by
GEORGE A. PAYNE, *Its Treasurer.*

UPPER COOS RAILROAD OF NEW HAMPSHIRE,
[L. S.] GEORGE VAN DYKE, *Its President.*
Countersigned by
JAMES P. COOK, *Its Treasurer.*
Signed, sealed, and delivered in presence of
HENRY C. IDE, } Witness to signatures of
WILLIAM L. QUIMBY, } Upper Coos Railroad of Vermont.

IRVING W. DREW, } Witness to signatures of
CHESTER B. JORDAN, } Upper Coos Railroad of New Hampshire.

STATE OF NEW HAMPSHIRE.

ROCKINGHAM SS. July 16, A. D. 1890. Then personally appeared George Van Dyke, in his capacity of president of the Upper Coos Railroad of New Hampshire, and acknowledged the foregoing instrument by him signed to be the free act and deed of said corporation.

Before me,
C. B. JORDAN,
Justice of the Peace throughout Said State.

STATE OF VERMONT.

CALEDONIA SS. July 3, A. D. 1890. Then personally appeared George A. Payne, in his capacity of treasurer of the Upper Coos Railroad of Vermont, and acknowl

edged the foregoing instrument by him signed to be the free act and deed of said corporation.

Before me,

WALTER P. SMITH,

Justice of the Peace for Said County of Caledonia.

EXHIBIT B.

This indenture made in duplicate this first day of May, eighteen hundred and ninety, by and between the Coos Valley Railroad Company, a corporation existing under the laws of Vermont, party of the first part, and with its successors and assigns hereinafter styled the lessor, and the Upper Coos Railroad, a corporation existing under the laws of New Hampshire, party of the second part, and with its successors and assigns hereinafter styled the lessee, witnesseth:

ARTICLE 1. In consideration of the covenants herein reserved to be paid and performed by the lessee, the lessor does hereby demise and lease to the lessee all the railroad of the lessor constructed or to be constructed in Vermont.

Also all its rights, if any such it has, to connect with, lease, operate, purchase, or otherwise control, or to co-operate with any other railroad or other railroad corporation.

Also the franchises and rights of the lessor to extend its railroad and to construct, operate, and maintain any railroads whatsoever.

Also its rights to take tolls, its franchises, rights of way, side-tracks, branches, stations, station grounds, bridges, and all other property whatsoever in any way appurtenant to the foregoing railroad, constructed or to be constructed, and all other property, rights, exemptions, and privileges whatsoever belonging to the lessor on said first day of May.

To have and to hold all the said railroad, property, franchises, rights, privileges, and all other of the premises hereby demised, with all the appurtenances thereof, to the lessee during the full term of nine hundred ninety-nine (999) years, commencing on said first day of May.

ART. 2. The lessee hereby covenants and agrees with the lessor, for and during the continuance of this lease, that it will duly and seasonably pay and discharge all taxes and other burdens which may be assessed on any of the demised premises; that it will indemnify and save harmless the lessor from all suits, damages, and costs for any act done or omitted by the lessee, or for anything arising out of the demised premises in connection with the use, possession, or operation thereof; that it will duly make all returns required by law to be made by the lessee, and will furnish the lessor with all statements to enable it to make all returns required by law of the lessor; that it will maintain and operate the demised premises in furtherance of the objects contemplated by all the laws, general and special, affecting the same, and in such manner as to promote the public convenience and advantage under said laws, and will from time to time make such alterations, improvements, and enlargements of said railroad and its appurtenances, as may be useful for the safe, convenient, and regular transportation of passengers, freight, and mails upon all and every part of the line; that it will, at the termination of this lease, surrender the demised premises, with all additions thereto and improvements thereof; and that it will pay as rent for the premises and in full therefor one dollar at the end of said term.

ART. 3. And whereas in the construction of the railroad of the lessor, or in the construction of the extensions or branches thereof, whether now authorized or hereafter authorized, or in equipping the same or any portion thereof, or in refunding the cost of the premises or any portion thereof, or in providing for any

other matter or thing for which the lessor may now lawfully issue its obligations secured by mortgage, or may hereafter be authorized so to do, the lessee may need to use such obligations.

Now, therefore, the lessor covenants and agrees with the lessee, that it will from time to time, on request of the lessee, unite with it in issuing its obligations, secured by mortgage as aforesaid, for such amounts and on such terms and with such other particulars as the lessee may from time to time request.

And in consideration thereof the lessee agrees that it will pay and discharge at its own cost all said obligations so to be issued as aforesaid, and the interest thereon, and all renewals thereof with interest thereon, and all costs, charges, or expenses with reference thereto; and that it will hold the lessor harmless from all loss arising out of the same.

And whereas by virtue of the caption of this lease all parts hereof in which either the word "lessor" or the word "lessee" is used, apply not only to the lessor or lessee, but to its successors and assigns respectively, yet in order that the matter may be plainly stated and without impairing the general rule of interpretation hereof, it is expressly agreed by and between the lessor and lessee, that all the provisions of this article with reference to the issuing of obligations and execution of mortgages to secure the same, shall operate between the successors and assigns of either the lessee or the lessor on the one side, and the lessor or lessee, or the successors of either as the case may be, on the other side; so that the successors and assigns of the lessee shall have all the benefits hereof and be entitled to demand and receive the issue of obligations and execution of mortgages as aforesaid, and the successors and assigns of the lessor shall be entitled to the benefit of the agreements herein by the lessee for payment and discharge, and of all other agreements herein for things to be done by the lessee.

Art. 4. It is expressly agreed between the parties hereto, that no failure on the part of the lessee to perform any of the matters and things herein covenanted or agreed to be done by it, nor any other matter or thing, shall cause a forfeiture of this lease, and that the only remedy hereunder, by either the lessor or lessee as against the other, shall be at law or in equity to enforce the performance of covenants and agreements herein set forth, or to recover damages resulting from some omission or default with reference thereto.

Art. 5. The lessor further covenants and agrees with the lessee that during the continuance of this lease it will maintain a lawful and beneficial corporate organization, make all returns, and do all other things on its part required to be done to uphold and save inviolate the demised premises; that it will elect and appoint all the officers, agents, or servants required or convenient for the purposes hereof, and invest them with such powers and duties as may be incidental thereto; that it will make any further assurances which from time to time may be found useful to secure to the lessee all rights, powers, and privileges under this lease according to its true intent; that it will from time to time authorize and execute any conveyance of property which, under the terms hereof, the lessee is authorized to sell or otherwise dispose of; that it will do any other act which may be necessary or convenient to enable the lessee to exercise any of the rights, powers, and privileges hereby demised, or intended to be demised; and especially that it will make all locations, commence and prosecute or defend all proceedings before any courts or other judicial tribunals, or official boards, commissioners, and any officials whatever, make all petitions and other applications and answers, pleas or other defences, commence and enter all appeals and other acts and things necessary, proper, or convenient with reference to any of the same, and as incident thereto execute all appropriate bonds and other instruments; and the lessee herewith covenants and agrees with the lessor to hold the lessor harmless from all loss, damage, or expense by reason of anything in this article contained, and to pay all the costs thereof.

ART. 6. The lessee may from time to time amend, repair, alter, or replace any of the buildings, tracks, rails, equipment, or other appurtenances of the railroad leased, or of any extension thereof, and may from time to time cause to be made and provided new and additional buildings, tracks, rails, equipment, or other appurtenances necessary or beneficial for the purposes of the demised property, and also such changes of location as may be so necessary or beneficial, and may from time to time sell or otherwise dispose of lands, rolling stock, equipments, or other property, which are now or which may hereafter become subject to this lease.

In testimony whereof the said Coos Valley Railroad Company has caused these presents to be subscribed by its president and countersigned by its treasurer and its corporate seal affixed, and the said Upper Coos Railroad of New Hampshire has caused these presents to be subscribed by its president and countersigned by its treasurer and its corporate seal affixed, the day and year first above written.

COOS VALLEY RAILROAD COMPANY,

[L. S.] By GEORGE VAN DYKE, *Its President.*

Countersigned by

GEORGE A. PAYNE, *Its Treasurer.*

UPPER COOS RAILROAD OF NEW HAMPSHIRE,

By GEORGE VAN DYKE, *Its President.*

Countersigned by

JAMES P. COOK, *Its Treasurer.*

Signed, sealed, and delivered in presence of

HENRY C. IDE, } Witness to signatures of
WILLIAM L. QUIMBY, } Coos Valley Railroad Company.

IRVING W. DREW, } Witness to signatures of
CHESTER B. JORDAN, } Upper Coos Railroad.

STATE OF NEW HAMPSHIRE.

ROCKINGHAM SS. July 16, A. D. 1890. Then personally appeared George Van Dyke, in his capacity of president of the Upper Coos Railroad of New Hampshire, and acknowleged the foregoing instrument by him signed to be the free act and deed of said corporation.

Before me,

C. B. JORDAN,

Justice of the Peace throughout said State.

STATE OF VERMONT.

CALEDONIA SS. July 3, A. D. 1890. Then personally appeared George A. Payne, in his capacity of treasurer of the Coos Valley Railroad Company, and acknowledged the foregoing instrument by him signed to be the free act and deed of said corporation.

Before me,

WALTER P. SMITH,

Justice of the Peace for said County of Caledonia.

LEASE

OF THE UPPER COOS RAILROAD (VERMONT) TO UPPER COOS RAILROAD (NEW HAMPSHIRE).

At an adjourned meeting of the stockholders of the Upper Coos Railroad, held at St. Johnsbury, Vermont, on the third day of July, A. D. 1890, all the stock-

holders except Charles A. Sinclair, Frank Stafford, and W. H. Hicks being present, the following vote was passed, viz.:

"*Resolved*, That the lease in duplicate from this corporation to the Upper Coos Railroad of New Hampshire, bearing date the first day of May, 1890, duly signed by George Van Dyke, president of this corporation, and by George A. Payne, as treasurer, is hereby accepted, ratified, and approved, and the treasurer of this corporation is authorized to deliver and exchange the same with the Upper Coos Railroad of New Hampshire, and to cause the same to be duly recorded." Which resolution was submitted to a stock vote, which being duly taken, examined, and reported was found to be as follows, viz.: In favor of said resolution, 288 shares, being all the stock present or represented at the meeting; against said resolution, none; and it was declared by the president as passed. Subsequently the meeting was adjourned to meet on the 31st day of July, 1890.

On the 31st day of July, 1890, stockholders of the corporation met, pursuant to adjournment, and the following proceedings took place, viz.: The clerk called the meeting to order, and Henry C. Ide was elected president of the meeting. Upon his request the records of the meeting of July 3, 1890, of which this meeting was an adjournment, were read at length by the clerk: the president then appointed a committee of one, viz., Philo B. Van Dyke, to examine and report the entire amount of stock outstanding and the amount of stock present at this meeting.

Said committee reported the entire amount of stock outstanding at 310 shares, and the amount of stock present at this meeting 310 shares, all the stock being represented; which report was accepted.

Philo B. Van Dyke submitted the following resolution, viz.:

"*Resolved*, That all proceedings of the meeting held July 3, 1890, including the votes authorizing the lease dated May 1, 1890, to the Upper Coos Railroad of New Hampshire, are hereby ratified and approved." Which resolution was submitted to a stock vote, which being duly taken, examined, and reported was found to be as follows, viz.: The favor of said resolution, 310 votes; against said resolution, none; and all the stock having been found to have voted in favor of said resolution it was declared by the president as passed.

A true copy of the records of the stockholders of the Upper Coos Railroad.

Certified by me this 21st day of August, A. D. 1890.

WILLIAM L. QUIMBY,
Clerk of Upper Coos Railroad.

At an adjourned meeting of the stockholders of the Upper Coos Railroad of New Hampshire, duly held at Portsmouth, on the sixteenth day of July, 1890, it appeared that all the stockholders were present; and among other things the following matters there took place and were entered of record, namely: Irving W. Drew submitted the following resolution: "*Resolved*, This corporation hereby accepts the lease from the Coos Valley Railroad Company, and the Upper Coos Railroad of Vermont, each dated the first day of May, 1890, being the same designated 'Exhibit A' and 'Exhibit B' in the proposed lease from the corporation to the Maine Central Railroad Company, and authorizes, approves, and ratifies the execution of each of the same by the president and treasurer of the corporation."

On motion of Irving W. Drew the above resolution was submitted to a stock vote, which being duly taken, examined, and reported, was found to be as follows, namely:

All stockholders were present, but under the statutes could only vote 2,380 shares. In favor of said resolution, 2,380 shares; against said resolution, none.

The votes in favor of said resolution being found to be more than two thirds of the shares represented at this meeting, and being the entire number of shares of this corporation outstanding so far as the same can lawfully be voted under the

laws of New Hampshire, said resolution was unanimously passed by all the stockholders of this corporation and was so declared by the president.

On motion of said Drew, voted that the president ask the approval of the stockholders, *viva voce*, of each of the votes passed at this meeting, including those accepting the leases from the Upper Coos Railroad of Vermont, and the Coos Valley Railroad Company, accepting the lease to the Maine Central Railroad Company, and authorizing mortgages of the existing line of railway of this corporation and of the proposed extension thereof, and the issue of the bonds secured by said mortgages and the discharge of the existing mortgage.

Thereupon the president called on each stockholder by name, in succession, to answer in the affirmative, in the event he approved of the aforegoing votes, otherwise to answer in the negative. The following stockholders answered in the affirmative, viz.:

FRANK JONES,
GEORGE VAN DYKE,
JAMES P. COOK,
CHARLES HOWARD,
ENOCH G. SWEATT,
GEORGE W. ARMSTRONG,
IRVING W. DREW,
PAYSON TUCKER (CHARLES A. SINCLAIR'S PROXY),

being all the stockholders of the corporation.

Thereupon it was declared by the president that all of the votes passed at this meeting, as aforesaid, were approved by every stockholder of the corporation answering *viva voce*.

A true copy from the stockholder's records of the Upper Coos Railroad of New Hampshire.

Attest:

C. B. JORDAN,
Clerk of said Corporation.

LANCASTER, NEW HAMPSHIRE, July 31, 1890.

This indenture made in duplicate this first day of May, eighteen hundred and ninety, by and between the Upper Coos Railroad, a corporation existing under the laws of Vermont, party of the first part, and with its successors and assigns hereinafter styled the lessor, and the Upper Coos Railroad, a corporation existing under the laws of New Hampshire, party of the second part, and with its successors and assigns hereinafter styled the lessee, witnesseth:

ARTICLE 1. In consideration of the covenants herein reserved to be paid and performed by the lessee, the lessor does hereby demise and lease to the lessee all the railroad of the lessor, constructed or to be constructed in Vermont.

Also all its rights, if any such it has, to connect with, lease, operate, purchase, or otherwise control, or to co-operate with any other railroad or other railroad corporation.

Also the franchises and rights of the lessor to extend its railroad and to construct, operate, or maintain any railroads whatsoever.

Also its rights to take tolls, its franchises, rights of way, side tracks, branches, stations, station grounds, bridges, and all other property whatsoever in any way appurtenant to the foregoing railroad, constructed or to be constructed, and all other property, rights, exemptions, and privileges whatsoever belonging to the lessor on said first day of May.

To have and to hold all the said railroad, property, franchises, rights, privileges, and all other of the premises hereby demised, with all the appurtenances thereof, to the lessee during the full term of nine hundred ninety-nine (999) years, commencing on said first day of May.

ART. 2. The lessee hereby covenants and agrees with the lessor, for and during the continuance of this lease, that it will duly and seasonably pay and discharge all taxes and other burdens which may be assessed on any or all of the demised premises; that it will indemnify and save harmless the lessor from all suits, damages, and costs for any act done or omitted by the lessee, or for anything arising out of the demised premises in connection with the use, possession, or operation thereof, that it will duly make all returns required by law to be made by the lessee, and will furnish the lessor with all statements to enable it to make all returns required by law of the lessor; that it will maintain and operate the demised premises in furtherance of the objects contemplated by all the laws, general and special, affecting the same, and in such manner as to promote the public convenience and advantage under said laws, and will from time to time make such alterations, improvements, and enlargements of said railroad and its appurtenances as may be useful for the safe, convenient, and regular transportation of passengers, freight, and mails upon all and every part of the line; that it will, at the termination of this lease, surrender the demised premises, with all additions thereto and improvements thereof; and that it will pay as rent for the premises and in full therefor one dollar at the end of said term.

ART. 3. And whereas in the construction of the railroad of the lessor, or in the construction of the extensions or branches thereof, whether now authorized or hereafter authorized, or in equipping the same or any portion thereof, or in refunding the cost of the premises or any portion thereof, or in providing for any other matter or thing for which the lessor may now lawfully issue its obligations secured by mortgage, or may hereafter be authorized so to do, the lessee may need to use such obligations.

Now, therefore, the lessor covenants and agrees with the lessee, that it will from time to time, on request of the lessee, unite with it in issuing its obligations, secured by mortgage as aforesaid, for such amounts and on such terms and with such other particulars as the lessee may from time to time request.

And in consideration thereof the lessee agrees that it will pay and discharge at its own cost all said obligations so to be issued as aforesaid, and the interest thereon, and all renewals thereof with interest thereon, and all costs, charges, or expenses with reference thereto; and that it will hold the lessor harmless from all loss arising out of the same.

And whereas by virtue of the caption of this lease all parts hereof in which either the word "lessor" or the word "lessee" is used, apply, not only to the lessor or lessee, but to its successors and assigns respectively, yet in order that the matter may be plainly stated, and without impairing the general rule of interpretation hereof, it is expressly agreed by and between the lessor and lessee, that all the provisions of this article with reference to the issuing of obligations and execution of mortgages to secure the same, shall operate between the successors and assigns of either the lessee or the lessor on the one side, and the lessor or lessee, or the successors of either as the case may be, on the other side; so that the successors and assigns of the lessee shall have all the benefits hereof and be entitled to demand and receive the issue of obligations and execution of mortgages aforesaid, and the successors and assigns of the lessor shall be entitled to the benefit of the agreements herein by the lessee for payment and discharge, and of all other agreements herein for things to be done by the lessee.

ART. 4. It is expressly agreed between the parties hereto, that no failure on the part of the lessee to perform any of the matters and things herein covenanted or agreed to be done by it, nor any other matter or thing shall cause a forfeiture of this lease, and that the only remedy hereunder, by either the lessor or lessee as against the other, shall be at law or in equity to enforce the performance of covenants and agreements herein set forth, or to recover damages resulting from some omission or default with reference thereto.

ART. 5. The lessor further covenants and agrees with the lessee that, during the continuance of this lease, it will maintain a lawful and beneficial corporate organization, make all returns and do all other things on its part required to be done to uphold and save inviolate the demised premises; that it will elect and appoint all the officers, agents, or servants required or convenient for the purposes hereof, and invest them with such powers and duties as may be incidental thereto; that it will make any further assurances which from time to time may be found useful to secure to the lessee all rights, powers, and privileges under this lease according to its true intent; that it will from time to time authorize and execute any conveyance of property which, under the terms hereof, the lessee is authorized to sell or otherwise dispose of; that it will do any other act which may be necessary or convenient to enable the lessee to exercise any of the rights, powers, and privileges hereby demised, or intended to be demised; and especially that it will make all locations, commence and prosecute or defend all proceedings before any courts or other judicial tribunals, or official boards, commissioners, and any officials whatever, make all petitions and other applications, and answers, pleas or other defences, commence and enter all appeals and other acts and things necessary, proper, or convenient with reference to any of the same, and as incident thereto execute all appropriate bonds and other instruments; and the lessee herewith covenants and agrees with the lessor to hold the lessor harmless from all loss, damage, or expense by reason of anything in this article contained, and to pay all the cost thereof.

ART. 6. The lessee may, from time to time, amend, repair, alter, or replace any of the buildings, tracks, rails, equipment, or other appurtenances of the railroad leased, or of any extension thereof, and may from time to time cause to be made and provided new and additional buildings, tracks, rails, equipment, or other appurtenances, necessary or beneficial for the purposes of the demised property, and also such changes of location as may be so necessary or beneficial, and may, from time to time, sell and otherwise dispose of lands, rolling stock, equipment, or other property, which are now or which may hereafter become subject to this lease.

In testimony whereof the said Upper Coos Railroad of Vermont has caused these presents to be subscribed by its president and countersigned by its treasurer and its corporate seal affixed, and the said Upper Coos Railroad of New Hampshire has caused these presents to be subscribed by its president and countersigned by its treasurer and its corporate seal affixed, the day and year first above written.

UPPER COOS RAILROAD OF VERMONT,
[L. S.] BY GEORGE VAN DYKE, *Its President.*
Countersigned by
GEORGE A. PAYNE, *Its Treasurer.*

UPPER COOS RAILROAD OF NEW HAMPSHIRE,
[L. S.] BY GEORGE VAN DYKE, *Its President.*
Countersigded by
JAMES P. COOK, *Its Treasurer.*

Signed, sealed, and delivered in presence of

HENRY C. IDE, } Witnesses to signatures of Upper Coos
WILLIAM L. QUIMBY, } Railroad of Vermont.

IRVING W. DREW, } Witnesses to signatures of Upper Coos
CHESTER B. JORDAN, } Railroad of New Hampshire.

STATE OF NEW HAMPSHIRE.

ROCKINGHAM SS. July 16, A. D. 1890. Then personally appeared George Van Dyke, in his capacity of president of the Upper Coos Railroad of New Hampshire,

and acknowledged the foregoing instrument by him signed to be the free act and deed of said corporation.

Before me,

C. B. JORDAN,

Justice of the Peace throughout said State.

STATE OF VERMONT.

CALEDONIA SS. July 3, A. D. 1890. Then personally appeared George A. Payne, in his capacity of treasurer of the Upper Coos Railroad of Vermont, and acknowledged the foregoing instrument by him signed to be the free act and deed of said corporation.

Before me,

WALTER P. SMITH,

Justice of the Peace in said County of Caledonia.

ESSEX COUNTY,

CLERK'S OFFICE, SEPTEMBER 16, 1890.

Received for record at 6 o'clock P. M., and recorded in Volume 15, pages 167 to 172, inclusive, of Land Records.

Attest:

CHARLES E. BENTON,

County Clerk.

LEASE

OF THE COOS VALLEY RAILROAD TO THE UPPER COOS RAILROAD OF NEW HAMPSHIRE.

At an adjourned meeting of the stockholders of the Coos Valley Railroad Company held at St. Johnsbury, Vermont, on the 3d day of July, A. D. 1890, all the stockholders except Charles A. Sinclair being present, the following vote was passed, viz.:

"*Resolved*, That the lease in duplicate from this corporation to the Upper Coos Railroad of New Hampshire, bearing date the first day of May, 1890, duly signed by George Van Dyke, president of this corporation, and by George A. Payne, as treasurer, is hereby accepted, ratified, and approved, and the treasurer of this corporation is authorized to deliver and exchange the same with the Upper Coos Railroad of New Hampshire, and to cause the same to be duly recorded."

Which resolution was submitted to a stock vote, which being duly taken, examined, and reported, was found to be as follows, viz.: In favor of said resolution, 500 shares; against said resolution, none, the 500 shares being all the stock present or represented at the meeting, and it was declared by the president as passed.

Subsequently the meeting was adjourned to meet on the 31st day of July, 1890.

On the 31st day of July, 1890, stockholders of the corporation met, pursuant to adjournment, and the following proceedings took place, viz.: The clerk called the meeting to order, and Henry C. Ide was elected president of the meeting; and upon his request the records of the meeting of July 3, 1890, of which this meeting was an adjournment, were read at length by the clerk; the president then appointed a committee of one, viz., Philo B. Van Dyke, to examine and report the entire amount of stock outstanding and the amount of stock present at this meeting. Said committee reported the entire amount of stock outstanding at 600 shares and the amount of stock present at this meeting 600 shares, all the stock being represented, which report was accepted.

Philo B. Van Dyke submitted the following resolution, viz.:

"*Resolved*, That all proceedings of the meeting held July 3, 1890, including the votes authorizing the lease dated May 1, 1890, to the Upper Coos Railroad of New Hampshire, are hereby ratified and approved." Which resolution was submitted to a stock vote, which being duly taken, examined, and reported was found to be as follows, viz.: In favor of said resolution, 600 shares; against said resolution, none; and all the stock having been found to have voted in favor of said resolution, it was declared by the president as passed.

A true copy of the records of the stockholders of the Coos Valley Railroad Company.

Certified by me this 21st day of August, A. D. 1890.

WILLIAM L. QUIMBY,
Clerk of Coos Valley Railroad Company.

At an adjourned meeting of the stockholders of the Upper Coos Railroad of New Hampshire, duly held at Portsmouth, on the sixteenth day of July, 1890, it appeared that all the stockholders were present, and among other things the following matters there took place and were entered of record, namely: Irving W. Drew submitted the following resolution:

"*Resolved*, This corporation hereby accepts the leases from the Coos Valley Railroad Company, and the Upper Coos Railroad of Vermont, each dated the first day of May, 1890, being the same designated 'Exhibit A' and 'Exhibit B' in the proposed lease from this corporation to the Maine Central Railroad Company, and authorizes, approves, and ratifies the execution of each of the same by the president and treasurer of this corporation."

On motion of Irving W. Drew the above resolution was submitted to a stock vote, which being duly taken, examined, and reported, was found to be as follows, namely: All stockholders were present, but under the statutes could only vote 2,380 shares. In favor of said resolution, 2,380 shares; against said resolution, none.

The votes in favor of said resolution being found to be more than two thirds of the shares represented at this meeting, and being the entire number of shares of this corporation outstanding so far as the same can lawfully be voted under the laws of New Hampshire, said resolution was unanimously passed by all the shareholders of this corporation and was so declared by the president.

On motion of said Drew, voted that the president ask the approval of the stockholders, *viva voce*, of each of the votes passed at this meeting, including those accepting the leases from the Upper Coos Railroad of Vermont, and the Coos Valley Railroad Company accepting the lease to the Maine Central Railroad Company and authorizing mortgages of the existing line of railway of this corporation and of the proposed extension thereof, and the issue of the bonds secured by said mortgages and the discharge of the existing mortgage.

Thereupon the president called on each stockholder by name in succession to answer in the affirmative in the event he approved of the foregoing votes, otherwise to answer in the negative. The following stockholders answered in the affirmative, viz.:

FRANK JONES,
GEORGE VAN DYKE,
JAMES P. COOK,
CHARLES HOWARD,
ENOCH G. SWEATT,
GEORGE W. ARMSTRONG,
IRVING W. DREW,
PAYSON TUCKER (CHARLES A. SINCLAIR'S PROXY),

being all the stockholders of the corporation.

Thereupon it was declared by the president that all of the votes passed at this meeting as aforesaid were approved by every stockholder of the corporation answering *viva voce*.

A true copy from the stockholders' records of the Upper Coos Railroad of New Hampshire.

Attest:

C. B. JORDAN,
Clerk of said Corporation.

LANCASTER, NEW HAMPSHIRE, July 31, 1890.

This indenture made in duplicate this first day of May, eighteen hundred and ninety, by and between the Coos Valley Railroad Company, a corporation existing under the laws of Vermont, party of the first part, and with its successors and assigns hereinafter styled the lessor, and the Upper Coos Railroad, a corporation existing under the laws of New Hampshire, party of the second part, and with its successors and assigns hereinafter styled the lessee, witnesseth:

ARTICLE 1. In consideration of the covenants herein reserved to be paid and performed by the lessee, the lessor does hereby demise and lease to the lessee all the railroad of the lessor constructed or to be constructed in Vermont.

Also all its rights, if any such it has, to connect with, lease, operate, purchase, or otherwise control, or to co-operate with any other railroad or other railroad corporation.

Also the franchises and rights of the lessor to extend its railroad and to construct, operate, and maintain any railroads whatsoever.

Also its rights to take tolls, its franchises, rights of way, side tracks, branches, stations, station grounds, bridges, and all other property whatsoever in any way appurtenant to the foregoing railroad, constructed or to be constructed, and all other property, rights, exemptions, and privileges whatsoever belonging to the lessor on said first day of May.

To have and to hold all the said railroad, property, franchises, rights, privileges, and all other of the premises hereby demised, with all the appurtenances thereof, to the lessee during the full term of nine hundred ninety-nine (999) years, commencing on said first day of May.

ART. 2. The lessee hereby covenants aad agrees with the lessor, for and during the continuance of this lease, that it will duly and seasonably pay and discharge all taxes and other burdens which may be assessed on any of the demised premises; that it will indemnify and save harmless the lessor from all suits, damages, and costs for any act done or omitted by the lessee, or for anything arising out of the demised premises in connection with the use, possession, or operation thereof; that it will duly make all returns required by law to be made by the lessee, and will furnish the lessor with all statements to enable it to make all returns required by law of the lessor; that it will maintain and operate the demised premises in furtherance of the objects contemplated by all the laws, general and special, affecting the same, and in such manner as to promote the public convenience and advantage under said laws, and will from time to time make such alterations, improvements, and enlargements of said railroad and its appurtenances, as may be useful for the safe, convenient, and regular transportation of passengers, freight, and mails upon all and every part of the line; that it will, at the termination of this lease, surrender the demised premises, with all additions thereto and improvements thereof; and that it will pay as rent for the premises and in full therefor one dollar at the end of said term.

ART. 3. And whereas in the construction of the railroad of the lessor, or in the construction of the extensions or branches thereof, whether now authorized or hereafter authorized, or in equipping the same or any portion thereof, or in re-

funding the cost of the premises or any portion thereof, or in providing for any other matter or thing for which the lessor may now lawfully issue its obligations secured by mortgage, or may hereafter be authorized so to do, the lessee may need to use such obligations.

Now, therefore, the lessor covenants and agrees with the lessee, that it will from time to time, on request of the lessee, unite with it in issuing its obligations, secured by mortgage as aforesaid, for such amounts and on such terms and with such other particulars as the lessee may from time to time request.

And in consideration thereof the lessee agrees that it will pay and discharge at its own cost all said obligations so to be issued as aforesaid, and the interest thereon, and all renewals thereof with interest thereon, and all costs, charges, or expenses with reference thereto; and that it will hold the lessor harmless from all loss arising out of the same.

And whereas by virtue of the caption of this lease all parts hereof in which either the word "lessor" or the word "lessee" is used, apply, not only to the lessor or lessee, but to its successors and assigns respectively, yet in order that the matter may be plainly stated without impairing the general rule of interpretation hereof, it is expressly agreed by and between the lessor and lessee, that all the provisions of this article with reference to the issuing of obligations and execution of mortgages to secure the same, shall operate between the successors and assigns of either the lessee or the lessor on the one side, and the lessor or lessee, or the successors of either as the case may be, on the other side; so that the successors and assigns of the lessee shall have all the benefits hereof and be entitled to demand and receive the issue of obligations and execution of mortgages as aforesaid, and the successors and assigns of the lessor shall be entitled to the benefit of the agreements herein by the lessee for payment and discharge, and of all other agreements herein for things to be done by the lessee.

Art. 4. It is expressly agreed between the parties hereto, that no failure on the part of the lessee to perform any of the matters and things herein covenanted or agreed to be done by it, nor any other matter or thing, shall cause a forfeiture of this lease, and that the only remedy hereunder, by either the lessor or lessee as against the other, shall be at law or in equity to enforce the performance of covenants and agreements herein set forth, or to recover damages resulting from some omission or default with reference thereto.

Art. 5. The lessor further covenants and agrees with the lessee that, during the continuance of this lease, it will maintain a lawful and beneficial corporate organization, make all returns and do all other things on its part required to be done to uphold and save inviolate the demised premises; that it will elect and appoint all the officers, agents, or servants required or convenient for the purposes hereof, and invest them with such powers and duties as may be incidental thereto; that it will make any further assurances which from time to time may be found useful to secure to the lessee all rights, powers, and privileges under this lease according to its true intent; that it will from time to time authorize and execute any conveyance of property which, under the terms hereof, the lessee is authorized to sell or otherwise dispose of; that it will do any other act which may be necessary or convenient to enable the lessee to exercise any of the rights, powers, and privileges hereby demised, or intended to be demised; and especially that it will make all locations, commence and prosecute or defend all proceedings before any courts or other judicial tribunals, or official boards, commissioners, and any officials whatever, make all petitions and other applications and answers, pleas or other defences, commence and enter all appeals and other acts and things necessary, proper, or convenient with reference to any of the same, and as incident thereto execute all appropriate bonds and other instruments; and the lessee herewith covenants and agrees with the lessor to hold the lessor harmless from all loss, damage, or expense by reason of anything in this article contained, and to pay all the cost thereof.

ART. 6. The lessee may, from time to time, amend, repair, alter, or replace any of the buildings, tracks, rails, equipment, or other appurtenances of the railroad leased, or of any extension thereof, and may from time to time cause to be made and provided new and additional buildings, tracks, rails, equipment, or other appurtenances, necessary or beneficial for the purposes of the demised property, and also such changes of location as may be so necessary or beneficial, and may, from time to time, sell and otherwise dispose of lands, rolling stock, equipments, or other property, which are now or which may hereafter become subject to this lease.

In testimony whereof the said Coos Valley Railroad Company has caused these presents to be subscribed by its president and countersigned by its treasurer and its corporate seal affixed, and the said Upper Coos Railroad of New Hampshire has caused these presents to be subscribed by its president and countersigned by its treasurer, and its corporate seal affxed, the day and year first above written.

COOS VALLEY RAILROAD COMPANY,

[L. S.] BY GEORGE VAN DYKE, *Its President.*

Countersigned by

GEORGE A. PAYNE, *Its Treasurer.*

UPPER COOS RAILROAD OF NEW HAMPSHIRE,

[L. S.] BY GEORGE VAN DYKE, *Its President.*

Countersigned by

JAMES P. COOK, *Its Treasurer.*

Signed, sealed, and delivered in presence of

HENRY C. IDE, } Witness to signatures of
WILLIAM L. QUIMBY, } Coos Valley Railroad Company.

IRVING W. DREW, } Witness to signatures of
CHESTER B. JORDAN, } Upper Coos Railroad.

STATE OF NEW HAMPSHIRE.

ROCKINGHAM SS. July 16, A. D. 1890. Then personally appeared George Van Dyke, in his capacity of president of the Upper Coos Railroad of New Hampshire, and acknowledged the foregoing instrument by him signed to be the free act and deed of said corporation.

Before me,
C. B. JORDAN,
Justice of the Peace throughout said State.

STATE OF VERMONT.

CALEDONIA SS. July 3, A. D. 1890. Then personally appeared George A. Payne, in his capacity of treasurer of the Coos Valley Railroad Company, and acknowledged the foregoing instrument by him signed to be the free act and deed of said corporation.

Before me,
WALTER P. SMITH,
Justice of the Peace for said County of Caledonia.

ESSEX COUNTY,
CLERK'S OFFICE, September 16, 1890.

Received for record at 6 o'clock P. M., and recorded in volume 15, pages 172 to 178 of Land Records.

Attest:
CHARLES E. BENTON,
County Clerk.

MORTGAGE OF UPPER COOS RAILROAD.

KNOW ALL MEN BY THESE PRESENTS, That whereas the Upper Coos Railroad, a corporation duly established in the State of New Hampshire, at a special meeting of said corporation, duly notified and holden for that and other purposes, on the 16th day of July, A. D. 1890, did among other things duly adopt the following vote:

Voted, That the directors be authorized to issue bonds secured by mortgage of the road, and the franchises, or a part thereof, to an amount not exceeding three hundred and fifty thousand ($350,000) dollars.

And whereas the directors of said corporation, in pursuance of said vote, and of the authority thereby given to them, have determined and directed that the bonds of said corporation, to the aggregate amount of three hundred and fifty thousand ($350,000) dollars, in sums of five hundred ($500) dollars and one thousand ($1,000) dollars each, and coupons for the semi-annual interest thereon at the rate of four per cent per annum, attached, be made ready for issue as said directors may order, all said bonds to bear the date of the first day of May, 1890, and be made payable in forty years from that date, with semi-annual interest thereon, as indicated by the coupons attached to said bonds.

And whereas said directors have also determined and directed that the payment of said bonds as aforesaid be secured by this mortgage deed, as mentioned in the vote aforesaid, the form of this deed having been adopted by said directors, and the execution thereof in the name and behalf of said corporation, authorized and directed by them.

Now, therefore, the said Upper Coos Railroad, in consideration of the premises and of the sum of one dollar to it paid by George W. Armstrong of Brookline, Massachusetts, Enoch G. Sweatt of Woonsocket, Rhode Island, and Irving W. Drew of Lancaster, New Hampshire, as trustees, does hereby give, grant, sell, and convey to said Armstrong, Sweatt, and Drew, and to their successors, when appointed as hereinafter provided, forever in trust to take and hold for the benefit and security of whoever may become the lawful holder of any of the bonds above mentioned, according to the conditions hereinafter provided, all the road of said corporation, from its commencement in Stratford, at its junction with the Grand Trunk Railway, to the westerly line of the town of Stewartstown, all in the State of New Hampshire, as said road is now constructed and improved, and no more; and all the railroad furniture and equipment of every kind belonging to or hereafter acquired by said corporation; and also the franchise of operating and taking tolls on the portion aforesaid, that is, from the junction of the Grand Trunk Railway to the westerly line of Stewartstown, but excluding all franchises appertaining to any extension of any part of the company's line southerly of said junction. Also, all its leasehold interests under and by virtue of the lease from the Upper Coos Railroad, a corporation existing under the laws of the State of Vermont, dated the first day of May, eighteen hundred and ninety.

To have and to hold the same, with all the rights, privileges, and appurtenances thereto belonging to them, the said Armstrong, Sweatt, and Drew, and their successors as aforesaid, forever in trust as aforesaid.

Provided, however, and this conveyance is made on the following conditions, to wit:

1st. Said corporation shall not issue, or have secured under this mortgage deed, a greater sum in bonds as aforesaid than three hundred and fifty thousand ($350,000) dollars.

Said bonds shall be signed by the president and treasurer of said corporation, and bear certificates signed by a majority of said trustees that the same are secured by this mortgage deed.

2d. Said corporation shall pay the interest and principal of said bonds as the same respectively shall become due and payable. And so long as said corporation

shall not be in any default in such payments, it may retain the possession of said road and property for use in the proper business and operation of said road. And the directors of said corporation shall have the right from time to time to change or renew any personal property hereby mortgaged, as they may deem necessary; and the property received in exchange or renewal shall be held by said trustees under this mortgage the same as if it were originally and specifically included therein.

Said Upper Coos Railroad, its lessees or assigns, may from time to time amend, repair, alter, or replace any of the buildings, rails, equipment, or other appurtenances of the railroad hereby mortgaged, or of any extension thereof; so, however, that in all such cases, and the Upper Coos Railroad hereby covenants that in all such cases there shall forthwith be made substitutions, additions, or improvements of the like kind and for the like purposes, which shall be full equivalents in all respects.

And said Upper Coos Railroad, its lessees or assigns, may from time to time cause to be made and provided new and additional buildings, tracks, rails, equipment or other appurtenances necessary or beneficial for the purposes of the mortgage premises, and also such changes of location as may be so necessary or beneficial, but not so as to divert the same substantially from the existing route, nor to impair the value of any part thereof.

The trustees are authorized, in their discretion, and from time to time at the written request of said Upper Coos Railrood, its lessees or assigns, to consent to the sale or other disposal of any lands, rolling stock, equipments, or other property which is now or which may hereafter become subject to this mortgage, and which said trustees are of the opinion have become unnecessary for the purposes of the mortgaged property, taking, however, such action as may be necessary or proper to secure the application of the proceeds thereof to its improvement.

All rolling stock and equipment substituted as herein provided shall be properly marked to identify the same; and such other acts shall be done by said Upper Coos Railroad, its successors and assigns, and by the trustees, as may be necessary or proper to give said new rolling stock and equipment the same status under the terms of this mortgage as that which it replaces.

And it is further agreed that all lands and other hereditaments which may hereafter be acquired as appurtenant to the mortgaged property, whether in substitution, or in improvement or addition, while this mortgage remains in force, shall be so taken as to be held subject to the terms hereof; and said Upper Coos Railroad covenants that it, its successors and assigns, shall, from time to time, make all such assurances of title as may be advised by counsel needful or proper to give full effect to this agreement.

3d. In case said corporation shall fail to fulfil all or any of the obligations in said bonds, the trustees aforesaid, or their successors, may take possession of all the property aforesaid, and manage the same at their discretion for the purposes of said road, and apply the net avails thereof to the payment of such of said bonds as may be outstanding against said corporation, or the interest thereon, in full or in such proportion to all as said avails may enable them to do.

4th. And in case said corporation shall fail for six months to pay the interest or principal of said bonds as the same shall become due, is shall be the duty of said trustees and their successors, on the written application of the lawful holders of fifty thousand ($50,000) dollars in amount of said bonds then outstanding, to commence proceedings in the supreme court of New Hampshire for the purpose of foreclosing said mortgage and of selling said property and franchise, and after paying the expenses of said sale and trust, for authority to pay the proceeds to the holders of said bonds *pro rata*, and the balance, if any, to the corporation.

5th. In case any vacancies shall happen in the board of trustees from any cause, the directors are authorized to fill the same by an appointment in writing, to be recorded in the registry of deeds, where this mortgage is recorded, and the person

so appointed and accepting shall have all the powers and be subject to all the duties of the original trustees.

6th. Said trustees, respectively, are not to be holden for the acts and defaults of each other, but each only for his own.

7th. And on the full performance of all the obligations, conditions, and stipulations in this deed, and in the bonds referred to in the same, by said corporation to be done and performed, this deed is to become void, and otherwise to remain in full force.

In witness whereof the said Upper Coos Railroad has caused its corporate name and seal to be hereto affixed by James P. Cook, its treasurer, this first day of May, A. D. eighteen hundred and ninety.

UPPER COOS RAILROAD,
By its Treasurer, JAMES P. COOK.

Signed, sealed, and delivered in presence of us:
IRVING W. DREW.
CHESTER B. JORDAN.
WILLIAM L. PUTNAM.

STATE OF NEW HAMPSHIRE.

ROCKINGHAM SS. July 16, 1890. Then personally appeared the within named James P. Cook, treasurer, acknowledged the foregoing instrument to be the voluntary act and deed of said Upper Coos Railroad.

Before me,
CHESTER B. JORDAN,
[L. S.] *Justice of the Peace for said State of New Hampshire.*

STATE OF NEW HAMPSHIRE.

SECRETARY'S OFFICE,
CONCORD, July 22, 1890.

A true record.

Attest:

A. B. THOMPSON,
Secretary of State.

STATE OF NEW HAMPSHIRE.

SECRETARY'S OFFICE.
CONCORD, October 14, 1890.

hereby certify that the foregoing is a true copy of the "Mortgage of Upper Coos Railroad" as recorded in this office.

In testimony whereof, I hereunto subscribe my official signature and affix the seal of the State.

C. B. RANDLETT,
[L. S.] *Deputy Secretary of State.*

MORTGAGE OF UPPER COOS RAILROAD.

At an adjourned meeting of the stockholders of the Upper Coos Railroad of New Hampshire, duly held at Portsmouth, on the 16th day of July, 1890, it appeared

that all the stockholders were present, and among other things, the following matters there took place and were entered of record, namely:

Irving W. Drew submitted the following resolution:

Resolved, That the mortgage of the extension of this railroad from its present terminus at North Stratford, to a connection with the Portland & Ogdensburg Railway, including the leasehold interests, under the lease from the Coos Valley Railroad Company, which mortgage is dated the first day of July, 1890, and signed by the treasurer of this corporation, and duly sealed, is hereby ratified as the act of this corporation. And the directors are authorized to deliver the same, and from time to time to issue bonds secured thereby, in accordance with the terms of the lease from this corporation to the Maine Central Railroad Company, bearing date May 1, 1890. Provided, nevertheless, the directors shall not issue any of such bonds until and so far as they can legally issue the same; also the directors are authorized to issue the stock of this corporation in lieu of any portions of said bonds, for the purposes of construction and equipment as provided in said lease, the Maine Central Railroad Company simultaneously indorsing on the certificates thereof a guaranty of dividends as further provided in said lease.

Provided, nevertheless, that the entire amount of bonds and stock to be issued, as herein authorized, shall at no time exceed the maximum of twenty-one thousand ($21,000) dollars per mile, as also provided in said lease. On motion of said Drew, the above resolution submitted to a stock vote, which, being duly taken, examined, and reported, was found to be as follows, namely:

All stockholders were present, but under the statute, could only vote 2,380 shares. In favor of said resolution, 2,380 shares; against resolution, none. The votes in favor of said resolution being found to be more than two thirds of the shares represented at this meeting, and being the entire number of shares of this corporation outstanding, so far as the same can lawfully be voted on under the laws of New Hampshire, said resolution was unanimously passed by all the shareholders of this corporation and was so declared by the president.

On motion of said Drew, voted that the president ask the approval of the stockholders, *viva voce*, of each of the votes passed at this meeting, including those accepting the lease from the Upper Coos Railroad of Vermont and the Coos Valley Railroad Company accepting the lease to the Maine Central Railroad Company and authorizing mortgages of the existing line of railway of this corporation, and of the proposed extension thereof, and the issue of the bonds secured by said mortgages and the discharge of the existing mortgages. Thereupon, the president called on each stockholder by name in succession, to answer in the affirmative, in the event he approved of the foregoing votes, otherwise, to answer in the negative. The following stockholders answered in the affirmative, viz.: Frank Jones, George Van Dyke, James P. Cook, Charles Howard, Enoch G. Sweatt, George W. Armstrong, Irving W. Drew, Payson Tucker (Charles A. Sinclair's proxy), being all the stockholders of the corporation. Thereupon, it was declared by the president that all of the votes passed at this meeting, as aforesaid, were approved by every stockholder of the corporation answering *viva voce*.

A true copy from the stockholders' records of the Upper Coos Railroad of New Hampshire.

Attest:

C. B. JORDAN,
Clerk of said Corporation.

LANCASTER, NEW HAMPSHIRE, July 31, 1890.

KNOW ALL MEN BY THESE PRESENTS:

The Upper Coos Railroad, a corporation duly established in the State of New Hampshire, for and in consideration of the matters hereinafter set out, and further for and in consideration of the matters set out in the lease from said cor-

poration to the Maine Central Railroad Company, dated the first day of May, eighteen hundred and ninety;

Does hereby give, grant, bargain, sell, and convey to George W. Armstong, of Boston, State of Massachusetts, Irving W. Drew, of Lancaster, State of New Hampshire, and Enoch G. Sweatt, of Woonsocket, State of Rhode Island, and to their successors when appointed, as hereinafter provided, forever;

In trust to take and hold for the benefit and security of whomsoever may become the lawful holder of any of the bonds or coupons hereinafter mentioned, according to the conditions hereinafter provided;

All the franchises and rights of said Upper Coos Railroad to extend its railroad southerly from its present southern terminus in Stratford, in New Hampshire, at its junction with the Grand Trunk Railway, to a connection with the line of the Portland & Ogdensburg Railway in the towns of Carroll, Whitefield, or Dalton, being thirty-three (33) miles or thereabouts, and the railroad now being constructed within the limits aforesaid, whether said railroad or said rights and franchises to construct such railroads are within the States of New Hampshire or Vermont, and whether by lease or otherwise, and to maintain and operate said extension.

Also its franchises and rights to construct any other extensions and to maintain and operate the same.

Also its rights to take tolls, its other franchises, rights of way, side tracks, branches, stations, station grounds, bridges, and all exemptions and privileges appurtenant to the foregoing extensions, or any of them.

Also all its leasehold interests under and by virtue of the lease from the Coos Valley Railroad Company, a corporation existing under the laws of Vermont, bearing date said first day of May.

To have and to hold the same, with all the rights, privileges, and appurtenances thereto belonging to them, the said Armstrong, Drew, and Sweatt, and their successors as aforesaid, forever, in trust as aforesaid.

Provided, however, that this conveyance is made on the following conditions, to wit:

1st. Whereas, said corporation proposes to issue its bonds bearing date said first day of May, payable in forty (40) years from their date, with interest at the rate of four and one half (4½) per cent per annum, payable in accordance with coupons to be attached, on the first day of May and the first day of November in each year, which bonds shall not exceed in all, at the rate of twenty-one thousand ($21,000) dollars for each mile of said extension constructed, or hereafter constructed, from said present terminus in said Stratford to said connection with said line of the said Portland & Ogdensburg Railway; but every mile between said terminus which may be constructed in Vermont, upon the franchises of the Coos Valley Railroad Company, or of any other railroad corporation admitted in lieu of said Coos Valley Railroad Company, by agreement between said Upper Coos Railroad and the Maine Central Railroad Company, or the successors or assigns of either, shall be estimated as part of the mileage aforesaid, so that bonds not exceeding said twenty-one thousand ($21,000) dollars per mile may be issued for each mile thereof.

Provided, further, said bonds shall be signed by the president and treasurer of said Upper Coos Railroad and shall bear certificates signed by a majority of said trustees that the same are secured by this mortgage.

2d. Said corporation shall pay the interest and principal of said bonds as the same respectively shall become due and payable, and so long as said corporation shall not be in any default in such payments, it may retain possession of said road and property for use in the proper business and operations of said road.

The directors of said corporation shall have the right, from time to time, to change or renew any personal property hereby mortgaged, as they may deem necessary; and the property received in exchange or renewal shall be held by said

trustees under this mortgage the same as if it were originally and specifically included therein.

Said Upper Coos Railroad, its lessees or assigns, may, from time to time, amend, repair, alter, or replace any of the buildings, rails, equipment, or other appurtenances of the extensions hereby mortgaged; so, however, that in all such cases, and the Upper Coos Railroad hereby covenants that in all such cases, there shall forthwith be made substitutions, additions, or improvements of the like kind and for the like purposes, which shall be full equivalent in all respects.

And said Upper Coos Railroad, its lessees or assigns, may from time to time cause to be made and provided new and additional buildings, tracks, rails, equipment, or other appurtenances necessary or beneficial for the purposes of the mortgaged premises, and also such changes of location as may be so necessary or beneficial, but not so as to divert the same substantially from the existing route nor to impair the value of any part thereof.

The trustees are authorized in their discretion, and from time to time, at the written request of said Upper Coos Railroad, its lessees or assigns, to consent to the sale or other disposal of any lands, rolling stock, equipment, or other property which is now or which may hereafter become subject to this mortgage and which said trustees are of the opinion have become unnecessary for the purposes of the mortgaged property, taking, however, such action as may be necessary or proper to secure the application of the proceeds thereof to its improvement.

All rolling stock and equipment substituted as herein provided shall be properly marked to identify the same, and such other acts shall be done by said Upper Coos Railroad, its successors or assigns, and by the trustees, as may be necessary or proper to give said new rolling stock and equipment the same status under the terms of this mortgage as that which it replaces.

And it is further agreed that all lands and other hereditament which may hereafter be required as appurtenant to the mortgaged property, whether in substitution or in improvement or addition, while this mortgage remains in force, shall be so taken as to be held subject to the terms hereof; and said Upper Coos Railroad covenants that it, its successors and assigns, shall from time to time make all such assurances of title as may be advised by counsel needful or proper to give full effect to this agreement.

3d. In case said corporation shall fail to fulfil all or any of the obligations in said bonds, the trustees aforesaid, or their successors, may take possession of all the property aforesaid and manage the same at their discretion for the purposes of said road, and apply the net avails thereof to the payment of such of said bonds as may be outstanding against said corporation, or the interest thereon, in full or in such proportion to all as said avails may enable them to do.

4th. And in case said corporation shall fail for six months to pay the interest or principal of said bonds as the same shall become due, it shall be the duty of said trustees and their successors on the written application of the lawful holders of fifty thousand ($50,000) dollars, in amount of said bonds, then outstanding, to commence proceedings in the supreme court of New Hampshire for the purpose of foreclosing said mortgage, and of selling said property and franchise, and after paying the expenses of said sale and trust, for authority to pay the proceeds to the holders of said bonds and unpaid interest *pro rata*, and the balance if any to the corporation.

5th. In case any vacancy shall happen in the board of trustees from any cause, the directors are authorized to fill the same by an appointment in writing to be recorded where this mortgage is recorded, and the person so appointed and accepting shall have all the powers and be subject to all the duties of the original trustees.

6th. Said trustees respectively are not to be holden for the acts and defaults of each other, but only for his own.

7th. And on the full performance of all the obligations, conditions, and stipulations of this deed, and of the bonds referred to in the same, by said corporation to be done and performed, this deed is to become void and otherwise to remain in full force.

In witness whereof the said Upper Coos Railroad has caused its corporate name and seal to be hereto affixed by James P. Cook, its treasurer, this first day of July, A. D. eighteen hundred and ninety.

Signed, sealed, and delivered in presence of
WILLIAM L. PUTNAM,
CHESTER B. JORDAN.

UPPER COOS RAILROAD,
[L. S.] *By its Treasurer*, JAMES P. COOK.

STATE OF NEW HAMPSHIRE.

ROCKINGHAM SS. July 16, A. D. 1890. Then and there personally appeared James P. Cook, treasurer, and acknowledged the foregoing instrument to be the voluntary act and deed of the Upper Coos Railroad.

Before me,
CHESTER B. JORDAN,
Justice of the Peace for said County and State.

STATE OF NEW HAMPSHIRE.

SECRETARY'S OFFICE.
CONCORD, September 16, 1890.

A true record.

Attest:
C. B. RANDLETT,
Deputy Secretary of State.

STATE OF NEW HAMPSHIRE.

SECRETARY'S OFFICE.
CONCORD, October 14, 1890.

I hereby certify that the foregoing is a true copy of the "Mortgage of the Upper Coos Railroad" as recorded in this office.

In testimony whereof I hereunto subscribe my official signature, and affix the seal of the State.

C. B. RANDLETT,
[L. S.] *Deputy Secretary of State.*

TENTH ANNUAL REPORT

RELATING TO THE

REGISTRATION AND RETURN

OF

BIRTHS, MARRIAGES, DIVORCES, AND DEATHS

IN NEW HAMPSHIRE,

FOR THE YEAR 1889.

VOLUME VII.—NEW SERIES.

MANCHESTER:
JOHN B. CLARKE, PUBLIC PRINTER.
1891.

THE STATE OF NEW HAMPHIRE.

OFFICE OF THE REGISTRAR OF VITAL STATISTICS,
CONCORD, N. H., November 1, 1890.

To His Excellency the Governor and the Honorable Council:

In conformity with the requirements of the laws of New Hampshire, I have the honor to submit herewith the tenth annual report relating to the registration and return of births, marriages, divorces, and deaths in the State of New Hampshire for the year 1889.

This report is somewhat larger and more extensive than any hitherto published. The arrangement of the work also differs somewhat from that of former reports, and includes a summary of observations embracing a review of some of the more prominent causes of death that have been registered during the past six years.

A longer period could not profitably be included in the deductions, inasmuch as prior to 1884 the registration returns relating to births and deaths were not sufficiently accurate for reliable calculations.

The returns of births have never been as complete as is desirable and are not likely to become so under the present system of registration. The returns of marriages, divorces, and deaths are reliable and as nearly correct as can be secured under any method of registration.

If our present system of registration is continued, in the next few years the records will be of very great value from a sanitary standpoint alone. They will indicate localities in which the mortality from certain diseases is

excessive, and thereby cause an examination into the causes.

A nomenclature of the causes of death for the guidance of physicians in making a more scientific classification of the causes of mortality is given on pages 6 to 16 inclusive.

Tables I. to XVIII., inclusive, may be regarded as foundation tables, from which may be constructed a great variety of special tables relating to births, marriages, divorces, and deaths. These tables should be maintained from year to year, with possibly some additions in the future.

In the summary observations are given facts and data which are constructed from the foundation tables and are presented in a way intended to show more vividly the exact status of the subjects considered.

It is evident that in a few years these observations will be of much more value than at present and that other and more comprehensive information may be added.

Reference should be had to the index at the end of this volume for any subject included in this report.

An acknowledgment is due Hon. E. B. Huse, supervisor of the census for the district of New Hampshire, for his courtesy in furnishing a statement of the population of the State by towns for 1890 in season to be used in this report.

Respectfully submitted.

Irving A. Watson

Registrar of Vital Statistics.

NOMENCLATURE

OF

CAUSES OF DEATH.

NAMES OF CAUSES OF DEATH.

It should be stated that the nomenclature of diseases in the nosological arrangement on the following pages is not intended to include the names of the whole list of morbid phenomena affecting the human organism, but the names of such only as are directly the cause of death, or such as ordinarily predispose to or set in motion the morbid processes that end in death.

In the construction of the classification now adopted, use has been made of the results and conclusions of a committee of the Royal College of Physicians, of England (who have been engaged for several years in a revision of the British nomenclature of diseases), as far as such conclusions have been ascertained from brief reports in different medical journals, and from such other sources as were accessible (the complete report not having yet been issued), and from examination of the classifications in use in different countries in Europe and America.

It should be said that all these classifications have been and are essentially alike, that all have been based designedly on observed facts and most advanced conclusions in relation to pathological processes and morbid conditions, inductive, causative, progressive, and ultimate.

The statistical nosology will consist of two lists of causes of death,

A TABULAR LIST AND SUPPLEMENTAL LIST.

The tabular list comprises the chief or primary causes of death which will be used in Table XIII., in the preparation of the Registrar's annual reports, and will, therefore, include all those named in the supplemental list, when the final arrangement is completed.

The supplemental list is subordinate to the tabular list, and contains synonyms, or names of related diseases, which may be actually, or are supposed to be, causes of death, and which are in addition to those in the tabular list, and which are often found in physicians' certificates of death. These will all have a place, in alphabetical order, in Table XVII., and will be variously grouped under different heads in Table XIII., as the figure which precedes each cause in the supplemental list will correspond with the figure of the head in the tabular list under which that cause is placed.

NOMENCLATURE OF CAUSES OF DEATH.

CLASSES.

I.	General Diseases. — A.	Specific and febrile.	(Zymotic.)
II.	General Diseases. — B.	Cachectic.	(Constitutional.)
III.	Special Diseases. — A.	Functional or organic.	(Local.)
IV.	Special Diseases. — B.	Developmental.	(Developmental.)
V.	Violent Deaths.	— From injuries.	(Violence.)

SUB-GROUPS OR ORDERS.

Class I. — Zymotic Diseases.

Order one, Miasmatic. Order two, Enthetic. Order three, Dietic. Order four, Parasitic.

Class II. — Constitutional Diseases.

Order one, Diathetic. Order two, Tubercular.

Class III. — Local Diseases.

Order one, Diseases of the Nervous System. Order two, Organs of Circulation. Order three, Organs of Respiration. Order four, Organs of Digestion. Order five, Urinary Organs. Order six, Reproductive Organs. Order seven, Osseous and Locomotory Organs. Order eight, Integumentary System.

Class IV. — Developmental Diseases.

Order one, Of Children. Order two, Of Women. Order three, Of Old Age. Order four, Of Nutrition.

Class V. — Violent Deaths.

Order one, Accidents and Negligence. Order two, Homicide. Order three, Suicide.

Class I. — Zymotic Diseases.

TABULAR LIST.

For Table XIII. of the Registration Report.

Order One. — Miasmatic.

I. One. — 1. Carbuncle.
2. Cholera, Asiatic.
3. Cholera, sporadic.
4. Cholera infantum.
5. Cholera morbus.
6. Croup (pseudo membranous).
7. Diphtheria.
8. Diarrhœa.
9. Dysentery.
10. Erysipelas.
11. Fever, bilious.
12. Fever, cerebro-spinal.
13. Fever, intermittent.
14. Fever, malarial.
15. Fever, typhoid.
16. Fever, typho-malarial.
17. Fever, unspecified.
18. Fever, yellow.
19. Influenza (epidemic).
20. Measles.
21. Mumps.
22. Metria (puerperal fever).
23. Pertussis.
24. Tonsilitis.
25. Scarlatina.
26. Small-pox.
27. Varicella.

Order Two. — Enthetic.

I. Two. — 1. Glanders.
2. Gonorrhea.
3. Hydrophobia.
4. Malignant pustule.
5. Septicæmia.
6. Syphilis.

SUPPLEMENTAL LIST.

Synonyms or Related Diseases.

Order One. — Miasmatic.

I. One. — 1. Anthrax.
Gangrenous boil.
4. Entero-colitis, } Infantile.
Gastro-enteritis, }
10. Hospital gangrene.
Pyemia.
Phagadena.
Phlegmon.
15. Infantile fever.
Typhus fever.
20. Rotheln.
21. Parotitis.
22. Child-bed fever.
23. Whooping-cough.
24. Quinsy.
25. Scarlet fever.
Angina maligna.
26. Varioloid.
27. Chicken-pox.
Miliaria.

Order Two. — Enthetic.

I. Two. — 2. Stricture of the urethra.
Gonorrheal ophthalmia.
5. Necusia.

Class I. — Zymotic Diseases — *Continued.*

Tabular List.	Supplemental List.
Order Three. — Dietic.	**Order Three. — Dietic.**
I. Three. — 1. Alcoholism. 2. Delirium tremens. 3. Inanition. 4. Purpura and scurvy.	I. Three. — 1. Intemperance. 3. Privation. Starvation. Neglect.
Order Four. — Parasitic.	**Order Four. — Parasitic.**
I. Four. — 1. Apthæ. 2. Worms. 3. Other parasites.	I. Four. — 1. Thrush. 2. Tapeworm. Trichianasis. 3. Scabies. Hydatids. Porrigo, favus, etc.

Class II. — Constitutional Diseases.

Order One. — Diathetic.	
II. One. — 1. Gout. 2. Dropsy. 3. Anæmia. 4. Cancer, various. 5. Cancer of breast. 6. Cancer of stomach. 7. Cancer of uterus. 8. Noma (canker). 9. Mortification. 10. Rheumatism.	II. One. — 2. Anasarca. 3. Leucocythæmia. Chlorosis. 4. Soft cancer. Epithelioma. Melanosis. Lupus. Other kinds of cancer. 9. Bed-sore. Dry gangrene. 10. Rheumatic carditis. Rheumatic synovitis. Rheumatic meningitis.
Order Two. — Tubercular.	
II. Two. — 1. Scrofula. 2. Tabes mesenterica. 3. Phthisis (pulmonary). 4. Hydrocephalus. 5. Tubercular meningitis.	II. Two. — 1. Psoas (lumbar) abscess. White swelling. Cretinism (goitre). Adenetis. Morbus coxarius. Pott's disease. 2. Tubercular peritonitis. 3. Hæmoptysis.

Class III. — Local Diseases.

Tabular List.	Supplemental List.
Order One. — Nervous System.	
III. One. — 1. Cephalitis.	III. One. — 1. Phrenitis.
2. Cerebritis.	Meningitis.
3. Apoplexy.	Cerebro-spinal meningitis (sporadic).
4. Paralysis.	5. Monomania.
5. Insanity.	Fright.
6. Chorea.	Grief.
7. Epilepsy.	Melancholia.
8. Tetanus.	Dementia.
9. Convulsions.	Rage.
10. *Brain diseases.**	6. Hysteria.
	8. Laryngismus.
	Lockjaw.
	Trismus nascentium.
	10. Neuralgia, cerebral.
	Neurasthenia.
	Disease of spinal cord.
	Necrencephalus (ramollissement).
	Thrombosis, cerebral.
Order Two. — Circulatory System.	
III. Two. — 1. Pericarditis.	III. Two. — 1. Carditis.
2. Aneurism.	Endocarditis.
3. *Heart diseases.**	3. Hypertrophia.
	Atrophia.
	Angina pectoris.
	Syncope.
	Arteritis.
	Ossification of arteries.
	Phlebitis.
	Hydropericardium.
	Embolus.
	Thrombosis.
Order Three. — Respiratory System.	
III. Three. — 1. Epistaxis.	III. Three. — 2. Œdema glottidis.
2. Laryngitis.	5. Empyema.
3. Bronchitis, acute.	Diaphragmitis.
4. Bronchitis, chronic.	Pneumothorax.
5. Pleurisy.	Hydrothorax.
6. Pneumonia.	6. Pulmonary apoplexy.
7. Asthma.	Hæmoptysis.†
8. *Lung diseases.**	Congestion of lungs.
	7. Grinders' asthma.
	Miners' asthma.
	Emphysema.
Order Four. — Digestive System.	
III. Four. — 1. Gastritis.	III. Four. — 1. Glossitis.
2. Enteritis.	Stomatitis.
3. Peritonitis.	Pharyngitis.
4. Ascites.	Œsophagitis.
	2. Gastro-enteritis, } Not infantile.
	Entero-colitis, }

* Not otherwise placed.

† See Class II. Order Two — 3, Sup. List.

CLASS III. — LOCAL DISEASES — *Continued.*

TABULAR LIST.	SUPPLEMENTAL LIST.
ORDER FOUR. — DIGESTIVE SYSTEM — *Continued.*	
5. Ulceration of intestines.	5 Perforation of.
6. Hernia.	6. Congenital. Femoral. Inguinal. Scrotal. Umbilical. Ventral.
7. Ileus.	7. Constipation. Obstipation.
8. Intussusception.	Perityphlitis. Typhlitis.
9. Stricture of intestines.	9. Strict œsophagus.
10. Fistula.	11. Dyspepsia. Pyrosis. Gastralgia. Hæmalemesis. Melæna.
11. *Stomach diseases.**	14. Gall-stones.
12. *Pancreas diseases.**	15. Cirrhosis.
13. Hepatitis.	
14. Jaundice.	
15. *Liver diseases.**	
16. *Spleen diseases.**	
17. *Bowel diseases.**	
ORDER FIVE. — URINARY SYSTEM.	
III. Five. — 1. Nephritis.	III. Five. — 3. Albuminuria.
2. Ischuria.	6. Cystirrhœa.
3. Nephria (Bright's disease).	8. Diuresis. Hæmaturia. Uræmia.
4. Diabetes.	9. Urethritis.
5. Calculus (gravel, etc.).	10. Orchitis.
6. Cystitis.	
7. Prostate, disease of.	
8. *Kidney diseases.**	
9. Bladder, diseases of.*	
10. Testicles, disease of.	
ORDER SIX. — GENERATIVE SYSTEM.	
FEMALE.	
III. Six. — 1. Ovarian dropsy.	III. Six. — 1. Ovarian tumor.
2. *Diseases of uterus.**	2. Hysteritis metritis. Uterine uteri. Polypus tumor. Ovaritis. Pelvic cellulitis.

* Not otherwise placed.

Class III. — Local Diseases. — *Continued.*

Tabular List.	Supplemental List.
Order Seven. — Osseous and Locomotory System.	
III. Seven. — 1. Bones, diseases of. 2. *Joint Diseases.** 3. Vertebræ, diseases of.	III. Seven. — 1. Ostitis. Periostitis. Fragilitas ossium. Mollities ossium. Rickets. Caries, necrosis. Exostosis. 2. Synovitis. Hip disease.‡ 3. Spine disease. Spine, caries and necrosis.
Order Eight. — Integumentary System.	
III. Eight. — 1. Phlegmon.† 2. Ulcer. 3. *Skin diseases.**	III. Eight. — 1. Abscess, part not stated. Boil. Whitlow. 3. Roseola. Urticaria. Eczema. Herpes. Pemphigus. Ecthyma. Impetigo. Psoriasis, etc. Dermatitis, (from burns, etc.).
Order Nine. — Organs of Special Sense.	
Eye and Ear.	
III. Nine. — 1. Malignus oculi. 2. Ophthalmitis. 3. Ossis petrosis. 4. Otitis.	

Class IV. — Developmental Diseases.

Order One. — Developmental Diseases of Children.	
IV. One. — 1. Still-born. 2. Debility, infantile. 3. Debility, premature birth. 4. Cyanosis. 5. Spina bifida.	IV. One. — 2. Asthenia. 4. Atelectasis pulmonum. 6. Anus imperforatus. Cleft palate. Idiocy. 8. Malnutrition.

* Not otherwise placed. † See Class I., Order One — 10, Sup.
‡ See Class II., Order Two — 1, Sup.

Class IV. — Developmental Diseases — *Continued.*

Tabular List.	Supplemental List.
Order One. — Developmental Diseases of Children — *Continued.*	
6. Other malformations. 7. Teething. 8. Innutrition.	
Order Two. — Developmental Diseases of Women.	
IV. Two. — 1. Paramenia. 2. Childbirth.*	IV. Two. — 1. Amenorrhœa. Chlorosis.† Climacteria. Menorrhagia. 2. Miscarriage. Abortion. Puerperal mania. Puerperal convulsions. Phlegmasia dolens. Cæsarian operation. Extra-uterine fœtation. Flooding. Retention of placenta. Presentation of placenta. Deformed pelvis. Mammary abscess.
Order Three. — Developmental Diseases of Old People.	
IV. Three. — 1. Old age.	
Order Four. — Diseases of Nutrition. Adolescent and Adult.	
IV. Four. — 1. Atrophy. 2. Debility.	IV. Four. — 1. Marasmus. Malnutrition. 2. Asthenia. Exhaustion.

Class V. — Violent Deaths.

Order One. — Accident or Negligence.	
V. One. — 1. Fractures and contusions. 2. Wounds, unspecified. 3. Burns and scalds. 4. Poison. 5. Drowning. 6. Suffocation. 7. Various.	V. One. — 1. Railroad and other accidents. 5. Lost at sea. 6. Asphyxia. Strangulation. 7. Exposure. Cold water. Frozen. Heat. Lightning. Surgical operation.

* See Class I., Order One — 22, Tab. List. † See Class II., Order One — 3, Sup.

CLASS V. — VIOLENT DEATHS — *Continued.*

TABULAR LIST.	SUPPLEMENTAL LIST.
ORDER TWO. — HOMICIDE.	
ORDER THREE. — SUICIDE.	
V. Three. — 1. Wounds, unspecified. Wounds, pistol or gunshot. Wounds, knife. 2. Poison. 3. Drowning. 4. Hanging. 5. Otherwise.*	V. Two. — 1. Infanticide. Patricide. Matricide. Fratricide. Filicide, etc.
ORDER FOUR. — VARIOUS.	
V. Four. — 1. Unclassified. 2. Cause not specified.	

SUGGESTIONS CONCERNING PHYSICIANS' CERTIFICATES OF DEATH.

It should be the endeavor to specify the causes of death as definitely and correctly as possible. It is not unusual to find a return of death with the physician's certificate naming the cause of death "Paralysis," "Paraplegia," "Fits," "Convulsions," "Dropsy," etc., which are merely secondary or consecutive causes, simply symptoms only, or results of some organic lesion or pathological derangement. Sometimes the alleged cause is really the final cause, as in a case of termination of life by paralysis, but the cause given as paralysis is not the determining cause. Apoplexy, or some lesion of the nervous centers, must be the original and determining cause of paralysis, paraplegia, hemiplegia, etc., and the determining cause should be stated as the primary in the return or certificate.

Convulsions are the symptoms or results of some antecedent or concurrent disease. They follow meningitis and other structural lesions of the nervous centers; they also occur from reflex derangement or disturbance of the nervous centers, as, in children, from intestinal irritation, or from inflammation, as in gastritis, enteritis, nephritis, etc. In such cases they may be contributory to death, and perhaps, in rare instances, a final cause, by inducing or taking the form of tonic or tetanic spasm. But as contributory, or as a final cause, they are simply concomitant, and are not unfrequently manifestations of the desperate efforts of expiring vitality to regain orig-

* Manner stated.

inal and normal control. They should find place as secondary causes only in certificates of death.

"Fits" is too unmeaning a term to be used in any case. The word in a medical sense literally means an attack, an occurrence, or succession of attacks of some physical or mental disturbance, as "fits of sickness," "fits of melancholy," etc., and is not properly used as synonymous with convulsions from any cause. It would be just as sensible to attribute a death to an "occurrence" or an "attack" as a cause, as to "fits," without other qualification.

"Dropsy" and "ascites" have been allowed to stand as determining causes of death because of extended use, and because of the obscurity with which their causes in rare instances are involved. We can scarcely conceive of a dropsical accumulation without antecedent organic or functional disorder, derangement of the absorbent or secretory system, or depravation of the blood. They are left in the tabular list with not a little reluctance. Paralysis is also left in the tabular list for a like reason, and with the same doubt of propriety.

"Inflammation" does not in any way define the cause of death. The organ or organs affected should be mentioned, or else the death must remain unclassified.

"Hemorrhage" is sometimes returned as a cause, but unless accompanied by a further statement no inference can be drawn as to the real cause of death. The suicide who cuts his throat frequently dies of hemorrhage; sometimes the patient with typhoid fever succumbs from the same cause, yet to report "hemorrhage" as the cause of death would leave the actual cause in obscurity.

It may be suggested that it is sometimes difficult, and occasionally impossible, to ascertain positively the chief or leading cause of death. The physician last in attendance may find several functional or structural diseases, the morbid conditions multiple and complex, and not only the initial derangement, but the succession of morbid processes — proximate, consecutive, and ultimate — inextricably entangled and lost to discovery.

The careful diagnostician will, however, even then be able to conceive the probable leading cause, but, whether or not, he will be able at least to ascertain the most prominent and controlling lesion or functional derangement then existing, and which may reasonably be accepted as the primary cause of death.

The preceding remark applies very properly to cases of adventitious diseases which prove fatal, when occurring in individuals already suffering from some chronic disease of slower progress, as when fatal dysentery attacks a consumptive person, or one having

chronic nephritis dies from pneumonia. The acute disease occurring independently of the chronic disease is the chief cause of death, although the fatal event may have been made more sure by the existence of the antecedent disease, and although the antecedent disease would have ultimately caused death.

In attributing death to scrofula, tuberculosis, tumor, cancer, abscess, and other generic terms as causes, the organic structure or locality where the disease is developed should always be given, otherwise such terms are very indefinite, and discredit the acquirements of the certifying physician.

The objects desired in presenting the preceding nomenclature of causes of death, and the suggestions following, are to subserve the purpose of greater uniformity in the use of nosological terms, and to promote the accomplishment of entire definiteness, accuracy, and completeness in the physicians' certificates of causes of death.

TENTH ANNUAL REPORT

OF

BIRTHS, MARRIAGES, DIVORCES, AND DEATHS

Registered in New Hampshire,

FOR THE YEAR ENDING

DECEMBER 31, 1889.

TABLE NO. I.

Showing Births for 1880, 1881, 1882, 1883, 1884, 1885, 1886, 1887, 1888, *and* 1889.

Counties.	Population in 1880.	Population in 1890.	Births.									
			1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.
Rockingham	49,064	49,728	733	675	749	692	637	640	757	727	750	752
Strafford	35,558	38,439	322	423	625	698	640	621	662	701	725	705
Belknap	17,948	20,285	215	227	273	261	242	256	263	296	307	328
Carroll	18,224	18,111	153	198	274	286	275	245	264	249	236	260
Merrimack	46,300	49,401	628	750	809	723	739	734	818	773	852	921
Hillsborough	75,634	93,131	840	879	1,617	1,675	1,843	1,952	2,148	2,313	1,798	1,923
Cheshire	28,734	29,728	255	348	445	496	554	511	514	525	553	546
Sullivan	18,161	17,286	245	236	265	269	268	267	230	269	276	287
Grafton	38,788	37,334	584	593	657	647	643	631	623	623	599	695
Coös	18,580	23,164	274	286	410	403	406	462	378	434	347	495
Total	346,991	376,607	4,249	4,615	6,124	6,150	6,247	6,319	6,657	6,910	6,443	6,912

TABLE NO. I. — *Continued.*

Showing Marriages for 1880, 1881, 1882, 1883, 1884, 1885, 1886, 1887, 1888, *and* 1889.

Counties.	Population in 1880.	Population in 1890.	Marriages.									
			1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.
Rockingham	49,064	49,728	310	382	419	399	419	447	440	457	420	484
Strafford	35,558	38,439	255	332	428	425	415	388	418	420	416	377
Belknap	17,948	20,285	108	177	166	198	147	150	183	213	183	186
Carroll	18,224	18,111	136	149	159	175	171	182	177	149	163	176
Merrimack	46,300	49,401	330	353	364	432	344	361	345	421	405	423
Hillsborough	75,634	93,131	752	674	1,025	949	886	815	876	915	879	1,013
Cheshire	28,734	29,728	195	206	232	262	238	233	240	255	221	250
Sullivan	18,161	17,286	134	151	149	167	138	109	140	123	146	154
Grafton	38,788	37,334	274	270	319	339	332	327	318	328	322	343
Coös	18,580	23,164	135	146	172	149	202	168	187	214	224	215
Total	346,991	376,607	2,629	2,830	3,433	3,495	3,292	3,180	3,324	3,495	3,379	3,621

TABLE NO. I. — *Continued.*

Showing Deaths for 1880, 1881, 1882, 1883, 1884, 1885, 1886, 1887, 1888, *and* 1889.

Counties.	Population in 1880.	Population in 1890.	Deaths.									
			1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.
Rockingham	49,064	49,728	627	717	732	699	873	911	963	876	896	875
Strafford	35,558	38,439	184	329	372	494	627	619	609	673	688	691
Belknap	17,948	20,285	147	153	219	262	285	289	362	369	392	389
Carroll	18,224	18,111	107	189	219	253	333	269	303	294	328	298
Merrimack	46,300	49,401	595	695	726	762	736	796	833	835	920	891
Hillsborough	75,634	93,131	1,203	1,396	1,390	1,551	1,655	1,701	1,681	1,697	1,846	1,740
Cheshire	28,734	29,728	249	271	405	418	497	494	475	482	488	525
Sullivan	18,161	17,286	190	261	261	254	273	284	328	283	327	314
Grafton	38,788	37,334	429	482	487	547	652	611	616	602	655	625
Coös	18,580	23,164	107	157	190	181	263	227	256	368	314	348
Total	346,991	376,607	3,829	4,650	5,001	5,421	6,194	6,201	6,426	6,479	6,854	6,696

TABLE NO. II.

Population of 1890; *Births, Marriages, and Deaths, with percentage of each to one thousand of the population, for the year ending December* 31, 1889.

COUNTIES.	Population in 1890.	Births.	Rate per 1,000 of population.	Marriages.	Rate per 1,000 of population.	Deaths.	Rate per 1,000 of population.
Rockingham	49,728	752	15.11	484	9.72	875	17.58
Strafford	38,439	705	18.34	377	9.80	691	17.97
Belknap	20,285	328	16.16	186	9.16	389	19.17
Carroll	18,111	260	14.35	176	9.71	298	16.45
Merrimack	49,401	921	18.64	423	8.56	891	18.03
Hillsborough	93,131	1,923	20.64	1,013	10.87	1,740	18.68
Cheshire	29,728	546	18.36	250	8.40	525	17.66
Sullivan	17,286	287	16.60	154	8.90	314	18.16
Grafton	37,334	695	18.61	343	9.18	625	16.74
Coös	23,164	495	21.36	215	9.27	348	15.02
Total	376,607	6,912	18.35	3,621	9.61	6,696	17.77

TABLE

Births, Marriages, and Deaths for

ROCKINGHAM

TOWNS.	Population in 1890.	Births.									
		Sex.					Parentage.				
		Male.	Female.	Not stated.	Total.	Rate per 1,000.	Both American.	Both foreign.	American mother and for'n father.	American father and for'n mother.	Not stated.
Atkinson. . ..	483	1	3	..	4	8.28	4	...	....	....	..
Auburn.....	630	7	3	..	10	15.87	9	1	....	....	..
Brentwood	967	2	11	..	* 13	13.44	9	...	1	1	2
Candia	1,104	11	7	..	18	16.30	14	...	....	1	3
Chester	958	4	2	..	6	6.26	5	...	....	1	..
Danville	666	11	3	..	14	21.02	11	2	....	1	..
Deerfield	1,216	12	10	..	22	18.09	20	...	....	....	2
Derry	2,602	24	19	..	43	16.52	31	2	2	5	3
East Kingston.	461	2	3	..	5	10.84	5	...	....	....	..
Epping	1,727	20	18	..	38	22.00	21	12	3	2	..
Exeter	4,289	37	27	..	64	14.92	32	18	5	6	3
Fremont	729	8	7	..	15	20.57	7	5	3	....	..
Greenland	648	3	1	..	4	6.17	4	...	....	....	..
Hampstead ...	857	1	1	..	2	2.33	2	...	....	....	..
Hampton	1,330	6	9	..	15	11.27	12	...	....	1	2
Hampton Falls	624	3	4	..	7	11.21	5	2	....	....	..
Kensington	547	3	5	..	8	14.62	6	...	1	1	..
Kingston	1,120	13	5	1	19	16.96	16	1	....	2	..
Londonderry. .	1,327	9	10	..	19	14.31	13	3	....	2	1
Newcastle	488	3	4	..	7	14.34	4	1	....	2	..
Newington ...	401	3	2	1	6	14.96	5	...	....	1	..
Newmarket ...	2,725	36	29	..	65	23.85	21	33	3	6	2
Newton	1,065	11	4	1	16	15.02	9	4	2	....	1
N. Hampton ..	804	7	1	..	8	9.94	8	...	....	....	..
Northwood ...	1,472	9	16	..	25	16.98	23	...	1	1	..
Nottingham...	986	5	5	1	11	11.15	8	...	....	....	3
Plaistow	1,093	9	2	..	11	10.06	3	4	1	2	1
Portsmouth ...	9,830	74	81	6	161	16.37	98	32	12	13	6
Raymond	1,123	11	5	..	16	14.24	16	...	....	....	..
Rye	978	10	8	..	18	18.40	15	1	1	1	..
Salem	1,806	6	4	..	10	5.53	6	1	....	2	1
Sandown	475	4	1	..	5	10.52	2	2	....	1	..
Seabrook	1,658	16	14	..	30	18.09	28	...	....	2	..
S. Hampton··.	370	1	4	..	5	13.51	4	1	....	....	..
S. Newmarket.	857	8	4	..	12	14.00	7	2	1	....	2
Stratham	679	7	7	..	14	20.61	11	1	2	....	..
Windham	633	2	4	..	6	8.47	4	2	....	....	..
Total.....	49,728	399	343	10	752	15.11	498	130	38	54	32

* At county almshouse, 2.

NO. III.

the year ending December 31, 1889.

COUNTY.

Marriages.						Deaths.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death rate per 1,000.
5	....	....	....	...	5	8	3	....	11	9	....	2	22.77
3	....	....	....	...	3	8	11	....	19	16	....	3	30.15
6	....	1	....	...	7	14	22	....	*36	13	2	21	37.22
8	1	....	...	...	9	13	8	....	21	18	1	2	19.02
6	....	....	....	...	6	9	12	....	21	19	1	1	21.92
1	....	....	....	...	1	4	2	....	6	5	....	1	9.00
7	....	...	....	...	7	16	13	....	29	22	....	7	23.84
23	....	3	1	...	27	14	20	....	34	29	1	4	13.06
2	....	....	....	...	2	11	5	....	16	14	1	1	34.70
13	2	1	1	2	19	14	25	....	39	32	3	4	22.58
23	11	....	2	2	38	25	41	....	66	52	9	5	15.39
9	....	2	....	...	11	6	4	....	10	8	1	1	13.71
3	....	...	1	...	4	5	7	....	12	12	....	...	18.51
3	....	....	....	...	3	5	10	....	15	7	....	8	17.50
10	...	....	1	1	12	12	2	....	14	14	....	...	10.52
4	....	....	....	1	5	3	2	....	5	3	....	2	8.01
3	....	...	....	1	4	4	6	....	10	8	2	...	18.28
5	....	....	...	...	5	11	14	....	25	21	1	3	22.32
10	....	....	1	...	11	4	10	....	14	10	1	3	10.55
5	....	....	....	...	5	7	6	....	13	13	....	...	26.65
1	..	....	....	...	1	4	3	1	8	5	....	3	19.95
12	15	4	....	...	31	31	29	2	62	51	11	...	22.75
11	....	....	....	...	11	8	8	....	16	15	....	1	15.02
1	....	....	....	4	5	6	4	....	10	10	....	...	12.43
11	....	1	2	2	16	9	12	....	21	16	....	5	14.26
3	....	....	....	1	4	8	9	1	18	17	....	1	18.25
3	3	...	....	...	6	5	5	....	10	7	2	1	9.14
109	13	10	10	6	148	102	91	1	194	154	20	20	19.73
11	....	1	1	...	13	7	11	....	18	18	....	...	16.02
12	....	....	....	1	13	5	11	....	16	13	1	2	16.36
18	1	....	....	...	19	10	9	.	19	15	2	2	10.52
3	....	....	....	...	3	4	2	....	6	6	....	...	12.63
14	....	....	...	...	14	11	12	....	23	22	....	1	13.87
....	....	....	....	...	....	2	2	....	4	4	....	...	10.81
1	....	....	1	...	2	6	5	....	11	8	2	1	12.83
6	1	....	....	...	7	6	4	....	10	9	....	1	14.72
5	1	....	....	1	7	5	8	....	13	8	3	2	20.53
370	48	23	21	22	484	422	448	5	875	703	64	108	17.58

* At county almshouse, 25.

TABLE NO. III.

STRAFFORD

TOWNS.	Population in 1890.	Births.									
		Sex.					Parentage.				
		Male.	Female.	Not stated.	Total.	Rate per 1,000.	Both American.	Both foreign.	American mother and for'n father.	American father and for'n mother.	Not stated.
Barrington....	1,404	1	3	..	4	28.43	3	1	..	..	..
Dover.....	12,786	127	116	5	248	19.39	114	78	25	25	6
Durham.....	870	1	1	..	2	2.29	1	..	..	1	..
Farmington...	3,063	36	33	..	69	22.20	56	2	5	5	1
Lee.....	602	2	4	..	6	9.96	4	2	..	..	..
Madbury.....	364	2	2	..	4	10.98	2	..	2	..	..
Middleton....	206	1	1	..	2	9.70	2	..	..	..	..
Milton.....	1,647	4	11	..	15	9.10	13	..	..	..	2
New Durham .	585	5	4	1	10	17.09	9	..	1	..	..
Rochester.....	7,395	59	51	3	113	15.28	67	36	5	2	3
Rollinsford...	2,003	29	17	1	47	23.46	8	30	6	3	..
Somersworth..	6,212	93	76	..	169	27.20	30	124	3	8	4
Strafford.....	1,302	6	10	..	16	12.28	16	..	..	..	..
Total.....	38,439	366	329	10	705	18.34	325	273	47	44	16

—*Continued.*

COUNTY.

Marriages.						Deaths.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death rate per 1,000.
5	1	....	....	....	6	5	17	....	22	19	1	2	15.66
85	14	15	8	7	129	122	129	1	252	186	50	16	19.70
3	....	....	....	....	3	9	3	....	12	9	....	3	13.79
19	1	....	....	....	20	25	30	....	55	48	....	7	17.95
3	....	2	....	....	5	2	4	....	6	5	....	1	9.96
3	....	....	....	....	3	1	3	....	4	4	....	....	10.98
....	....	....	....	....	....	6	3	....	9	7	....	2	43.68
8	....	3	1	1	13	7	10	....	17	15	1	1	10.32
6	1	....	....	....	7	10	8	....	18	17	....	1	30.76
48	11	8	4	7	78	52	51	1	104	86	11	7	14.06
10	7	4	1	....	22	14	13	....	27	23	4	....	13.47
36	39	....	2	5	82	57	81	1	139	99	38	2	22.37
8	....	1	....	....	9	12	14	....	26	25	....	1	19.96
234	74	33	16	20	377	322	366	3	691	543	105	43	17.97

TABLE NO. III.

BELKNAP

TOWNS.	Population in 1890.	Births. Sex. Male.	Female.	Not stated.	Total.	Rate per 1,000.	Parentage. Both American.	Both foreign.	American mother and for'n father.	American father and for'n mother.	Not stated.
Alton	1,372	7	14	..	21	15.30	19	1	1	...	...
Barnstead	1,262	5	5	..	10	7.92	10	...	...	...	...
Belmont	1,149	9	8	..	17	14.79	13	2	...	1	1
Center Harbor	479	2	2	..	4	8.35	4	...	...	...	...
Gilford	3,585	22	24	1	47	13.11	23	14	2	5	3
Gilmanton	1,204	4	6	..	10	8.30	8	...	...	...	2
Laconia	6,128	75	69	..	144	23.49	40	68	16	14	6
Meredith	1,629	15	10	..	25	15.34	22	1	1	1	...
New Hampton	935	3	7	..	10	10.69	9	...	...	...	1
Sanbornton	1,021	7	5	..	12	11.75	8	1	1	1	1
Tilton	1,521	15	12	1	28	18.40	15	7	1	5	...
Total	20,285	164	162	2	328	16.16	171	94	22	27	14

—*Continued.*

COUNTY.

Marriages.						Deaths.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death rate per 1,000.
6	....	1	....	....	7	22	15	....	37	29	1	7	26.96
10	....	....	...	1	11	12	16	....	28	20	1	7	22.18
6	....	....	1	3	10	9	12	....	21	19	....	2	18 27
9	....	1	....	....	10	....	3	....	3	....	....	3	6.26
20	2	5	4	2	33	23	30	....	53	44	5	4	14.79
5	....	....	....	1	6	10	10	....	20	15	....	5	16.61
23	16	2	3	6	50	61	55	....	116	92	15	9	18.92
24	....	....	....	1	25	20	14	....	34	33	....	1	20.87
4	....	....	....	....	4	12	9	....	21	19	....	2	22.46
6	....	....	1	...	7	13	11	...	24	24	....	....	23.50
19	2	1	1	...	23	19	13	....	32	24	4	4	21.10
132	20	10	10	14	186	201	188	....	389	319	26	44	19.17

TABLE NO. III.

CARROLL

TOWNS.	Population in 1890.	Births.									
		Sex.					Parentage.				
		Male.	Female.	Not stated.	Total.	Rate per 1,000.	Both American.	Both foreign.	American mother and for'n father.	American father and for'n mother.	Not stated.
Albany	373	5	4	..	9	24.12	6	1	1	1	...
Bartlett	1,247	16	12	4	32	25.66	10	11	4	2	5
Brookfield	349	.....	2	..	2	5.73	1	...	1	....	...
Chatham	329	3	2	..	5	15.19	3	...	....	....	2
Conway	2,333	13	20	..	33	14.14	31	1	1	....	...
Eaton	512	2	2	..	4	7.81	4	...	....	....	...
Effingham	720	5	8	..	13	18.05	12	...	1	....	...
Freedom	633	3	9	..	12	18.95	11	1	....	....	...
Hart's Locat'n	187	.....	.....	.....	.....	.....	...	...	....	....	...
Jackson	580	6	3	..	9	15.51	8	...	....	1	...
Madison	555	3	8	..	11	19.81	11	...	....	....	...
Moultonboro'.	1,034	7	12	..	19	18.37	15	...	1	....	3
Ossipee	1,634	21	3	..	24	14.68	21	1	....	....	2
Sandwich	1,302	8	13	..	21	16.08	18	...	1	....	2
Tamworth	1,034	7	6	..	13	12.57	13	...	....	....	...
Tuftonboro'	765	3	5	..	8	10.45	6	...	....	2	...
Wakefield	1,518	17	13	..	30	19.76	15	4	5	4	2
Wolfeborough	3,006	8	3	4	15	4.99	12	...	....	....	3
Total	18,111	127	125	8	260	14.35	197	19	15	10	19

—*Continued.*

COUNTY.

Marriages.						Deaths.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death rate per 1,000.
3	....	1	....	...	4	2	1	....	3	3	....	....	8.04
4	1	....	1	...	6	6	10	1	17	17	....	....	13.63
5	....	....	....	...	5	9	4	....	13	13	....	....	37.24
3	....	....	....	...	3	....	3	....	3	3	....	....	9.11
34	1	3	1	1	40	22	19	....	41	38	1	2	17.57
8	....	....	....	...	8	2	2	....	4	4	....	....	7.81
6	....	....	....	...	6	11	6	....	17	16	1	....	23.61
12	....	....	....	...	12	3	4	....	7	6	....	1	11.05
....	1	....	....	...	1	....	....	...	....	....	....	....	.....
1	1	1	....	...	3	4	2	....	6	5	....	1	10.34
1	....	....	....	...	1	2	5	....	7	6	....	1	12.61
9	....	....	....	...	9	6	11	....	17	14	....	3	16.44
11	....	....	....	1	12	14	13	....	27	23	....	4	16.52
11	....	....	....	...	11	18	11	....	29	28	....	1	22.19
9	....	....	....	...	9	6	11	....	17	15	....	2	16.44
4	....	....	....	...	4	11	13	....	24	24	....	....	31.37
7	....	1	3	...	11	11	11	....	22	21	....	1	14.49
27	....	3	1	...	31	23	20	1	44	38	1	5	14.63
155	4	9	6	2	176	150	146	2	298	274	3	21	16.45

TABLE NO. III.

MERRIMACK

TOWNS.	Population in 1890.	Births. Sex. Male.	Female.	Not stated.	Total.	Rate per 1,000.	Parentage. Both American.	Both foreign.	American mother and for'n father.	American father and for'n mother.	Not stated.
Allenstown...	1,486	37	21	..	58	39.03	4	45	5	4	...
Andover	1,088	8	6	1	15	13.78	13	1	1	....	...
Boscawen	1,487	12	20	..	32	21.51	16	7	1	3	5
Bow	723	2	2	1	5	6.91	5	...	....	....	...
Bradford.....	806	6	4	..	10	12.40	9	...	....	....	1
Canterbury...	964	7	5	..	12	12.44	10	...	....	2	...
Chichester ...	662	1	5	..	6	9.06	5	...	....	1	...
Concord.....	17,018	181	154	..	335	19.68	154	96	40	38	7
Danbury	678	4	4	..	8	11.79	6	...	1	1	...
Dunbarton ...	523	1	4	1	6	11.47	5	...	1	....	...
Epsom.....	813	2	8	..	10	12.30	9	...	....	1	...
Franklin	4,064	36	38	1	75	18 45	44	20	6	5	...
Henniker.....	1,382	12	7	..	19	13.74	16	2	1	....	...
Hill.....	548	5	9	..	14	25.58	12	...	...	1	1
Hooksett	1,893	11	18	2	31	16.37	6	20	1	4	...
Hopkinton....	1,816	15	8	..	23	12.66	13	1	1	1	7
Loudon	997	6	6	1	13	13.03	10	2	1	....	...
Newbury.....	487	6	1	..	7	14.37	5	1	....	1	...
New London..	797	8	5	..	13	16.31	12	...	....	1	...
Northfield....	1,105	9	9	1	19	17.19	15	...	3	....	1
Pembroke....	3,163	27	23	..	50	15.80	30	16	2	2	...
Pittsfield	2,605	34	40	..	74	28.41	13	52	4	4	1
Salisbury.....	658	12	6	..	18	27.35	14	1	1	2	...
Sutton.....	849	9	7	..	16	18.84	11	4	....	1	...
Warner	1,380	9	17	..	26	18.84	23	1	....	....	2
Webster	565	2	6	..	8	14.15	5	2	....	....	1
Wilmot	844	11	6	1	18	21.32	16	...	2	....	...
Total	49,401	473	439	9	921	18.64	481	271	71	72	26

—*Continued.*

COUNTY.

Marriages.						Deaths.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death rate per 1,000
5	7	....	2	...	14	5	6	....	11	9	2	....	7.40
7	....	....	....	1	8	14	6	....	20	15	1	4	18.38
7	....	....	1	...	8	22	27	....	49	33	5	11	32.95
1	....	....	....	1	2	4	3	2	9	9	....	....	12.44
6	....	....	1	...	7	10	5	....	15	13	....	2	18.61
3	....	1	...	...	4	8	9	....	17	16	....	1	17.63
4	....	....	...	...	4	2	5	...	7	6	1	....	10.57
97	21	16	11	9	154	162	174	....	*336	285	45	6	19.74
6	1	....	...	...	7	9	8	....	17	17	....	....	25.07
4	1	....	1	...	6	3	4	1	8	8	....	....	15.29
8	....	....	...	...	8	6	5	....	11	11	....	...	13.53
24	3	3	2	...	32	29	26	....	55	47	4	4	13.53
11	1	....	...	...	12	18	8	....	26	25	1	....	18.81
5	....	....	...	...	5	5	7	....	12	10	....	2	21.89
4	4	2	...	...	10	10	19	1	30	25	4	1	10.56
7	....	...	....	1	8	20	18	....	38	29	....	9	20.92
6	....	....	....	1	7	12	12	2	26	25	....	1	26.06
7	....	....	1	...	8	4	4	....	8	7	1	....	16.42
6	....	....	...	...	6	2	5	....	7	7	....	....	8.77
6	....	....	1	3	10	10	7	....	17	14	....	3	15.38
19	17	3	1	2	42	9	17	....	26	18	6	2	8.22
14	1	1	....	3	19	24	29	2	55	45	3	7	21.11
5	....	....	....	1	6	7	9	....	16	12	1	3	24.31
5	....	....	....	2	7	6	12	....	18	17	....	1	21.20
12	...	....	....	...	12	14	12	....	26	24	....	2	18.84
6	....	...	....	1	7	7	9	....	16	15	....	1	28.31
9	...	1	....	...	10	6	9	....	15	13	....	2	17.77
294	56	27	21	25	423	428	455	8	891	755	74	62	18.03

At public institutions, 51.

TABLE NO. III.

HILLSBOROUGH

TOWNS.	Population in 1890.	Births. Sex. Male.	Female.	Not stated.	Total.	Rate per 1,000.	Parentage. Both American.	Both foreign.	American mother and for'n father.	American father and for'n mother.	Not stated.
Amherst	1,043	7	6	..	13	12.46	11	1	....	1	..
Antrim	1,247	18	6	..	24	19.24	18	3	1	....	2
Bedford	1,100	8	4	1	13	11.81	12	1	....	....	..
Bennington	543	7	5	..	12	22.09	7	2	2	1	..
Brookline	546	11	6	..	17	31.13	11	5	....	1	..
Deering	531	4	2	..	6	11.29	5	1	....	....	..
Francestown	835	7	5	..	12	14.37	8	3	1	....	..
Goffstown	1,973	16	16	..	32	16.21	21	5	2	3	1
Greenfield	609	8	3	..	11	18.06	8	3	....	....	..
Greenville	1,255	17	20	..	37	29.48	5	23	3	3	3
Hancock	639	6	7	..	13	20.34	11	1	1	....	..
Hillsborough	2,111	24	22	1	47	22.26	38	3	3	2	1
Hollis	1,000	6	4	..	10	10.00	4	....	....	6	..
Hudson	1,080	9	6	..	15	13.88	14	1	....	....	..
Litchfield	252	1	....	..	1	3.96	1	....	....	....	..
Lyndeborough	657	6	5	..	11	16.74	10	1	....	....	..
Manchester	44,105	384	429	13	826	18.72	131	516	63	48	68
Mason	629	6	6	..	12	19.07	9	2	....	1	..
Merrimack	954	4	7	..	11	11.53	7	3	....	1	..
Milford	3,016	20	31	..	51	16.90	36	10	2	2	1
Mont Vernon	480	1	6	..	7	14.58	5	....	....	1	1
Nashua	19,278	287	276	3	566	29.35	179	300	43	37	7
New Boston	1,065	10	12	1	23	21.59	19	2	....	2	..
New Ipswich	969	12	11	..	23	23.73	12	9	....	2	..
Pelham	801	6	5	..	11	13.74	9	1	1	....	..
Peterborough	2,512	18	23	..	41	16.32	19	13	2	6	1
Sharon	126	....	1	..	1	7.93	....	....	....	....	1
Temple	320	5	1	..	6	18.75	6	....	....	....	..
Weare	1,551	11	15	..	26	16.76	22	1	....	....	3
Wilton	1,842	25	18	..	*43	23.34	18	7	2	10	6
Windsor	62	2	....	..	2	32.25	2	....	....	....	..
Total	93,131	946	958	19	1,923	20.64	658	917	126	127	95

* At county almshouse, 12.

—*Continued.*

COUNTY.

Marriages.						Deaths.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death rate per 1,000.
6	....	1	....	....	7	13	8	...	21	20	1	....	20.13
6	1	1	1	...	9	7	4	...	11	9	1	1	8.82
5	....	....	....	....	5	7	9	...	16	14	2	...	14.54
2	....	....	....	....	2	8	5	...	13	11	2	....	23.94
4	....	....	1	1	6	6	10	...	16	16	....	....	29.30
3	....	....	1	1	5	6	5	...	11	10	....	1	20.71
2	....	....	....	....	2	9	13	...	22	20	2	....	26.34
7	....	1	....	....	8	13	17	1	31	27	1	3	15.71
4	....	....	1	...	5	9	7	...	16	14	1	1	26.27
6	8	2	2	2	20	19	11	...	30	23	6	1	23.90
10	....	1	....	....	11	7	4	...	11	10	1	....	17.21
25	1	1	....	....	27	13	7	...	20	20	....	....	9.47
4	....	....	....	....	4	4	7	...	11	10	....	1	11.00
7	1	2	....	....	10	8	10	...	18	18	....	....	16.66
....	....	....	....	....	....	2	1	...	3	1	1	1	11.90
4	....	....	....	....	4	8	6	...	14	14	....	....	21.30
166	224	56	48	8	502	382	429	27	838	600	223	15	19.00
3	....	1	....	1	5	10	2	...	12	12	....	....	19.07
1	....	....	1	...	2	7	13	...	20	18	....	2	20.96
24	....	1	2	1	28	24	26	...	50	43	6	1	16.57
1	....	....	....	1	2	2	1	...	3	2	....	1	6.25
108	80	39	28	4	259	181	166	...	347	273	54	20	17.99
6	....	2	2	...	10	12	9	...	21	18	2	1	19.71
6	6	....	....	....	12	8	13	...	21	20	....	1	21.67
3	....	3	....	....	6	5	6	...	11	7	2	2	13.74
14	3	2	1	...	20	27	23	...	50	40	7	3	19.90
3	....	....	....	....	3	....	2	...	2	2	....	....	15.87
4	....	....	....	2	6	1	2	...	3	2	....	1	9.37
13	....	....	....	....	13	12	18	...	30	25	1	4	19.34
16	1	1	2	...	20	40	27	...	*67	33	4	30	36.37
....	....	....	....	....	....	1	....	...	1	1	....	....	16.12
463	325	114	90	21	1,013	851	861	28	1,740	1,333	317	90	18.68

* At county almshouse, 38.

TABLE NO. III.

CHESHIRE

TOWNS.	Population in 1890.	Births. Sex. Male.	Female.	Not stated.	Total.	Rate per 1,000.	Parentage. Both American.	Both foreign.	American mother and for'n father.	American father and for'n mother.	Not stated.
Alstead	867	7	6	..	13	14.99	9	...	1	1	2
Chesterfield	1,048	10	3	..	13	12.40	12	...	...	....	1
Dublin	579	4	5	..	9	15.54	8	...	1	....	...
Fitzwilliam	1,122	9	10	..	19	16.93	12	3	2	2	...
Gilsum	643	5	7	..	12	18.66	10	...	....	2	...
Harrisville	748	2	4	..	6	8.02	3	1	1	1	...
Hinsdale	2,350	18	19	1	38	16.42	23	8	4	2	1
Jaffrey	1,463	16	14	..	30	20.50	14	10	....	6	...
Keene	7,461	75	51	4	130	17.42	77	29	6	5	13
Marlborough	1,693	31	23	..	54	31.30	22	28	2	1	1
Marlow	584	5	7	..	12	20.54	12	...	....	....	...
Nelson	333	1	....	..	1	3.00	1	...	....	....	...
Richmond	476	5	3	..	8	16.80	8	...	....	....	...
Rindge	986	8	8	..	16	16.16	11	4	1	....	...
Roxbury	129	....	1	..	1	7.75	1	...	....	....	...
Stoddard	399	1	2	..	3	7.51	3	...	....	....	...
Sullivan	337	1	2	..	3	8.90	3	...	....	....	...
Surry	270	3	2	..	5	18.51	4	1	....	....	...
Swanzey	1,607	16	9	..	25	15.55	22	1	2	....	...
Troy	999	13	13	..	26	26.02	20	3	1	1	1
Walpole	2,149	35	29	..	64	29.78	32	18	5	8	1
Westmoreland	903	7	5	2	14	15.50	6	1	....	....	7
Winchester	2,582	26	18	..	44	17.04	29	10	2	2	1
Total	29,728	298	241	7	546	18.36	342	117	28	31	28

— *Continued.*

COUNTY.

Marriages.						Deaths.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death rate per 1,000.
5	....	1	....	....	6	9	7	....	16	13	....	3	18.45
7	1	....	1	....	9	8	10	....	18	17	....	1	17.17
2	....	....	....	....	2	2	10	....	12	10	1	1	20.72
10	....	....	....	2	12	10	12	....	22	21	....	1	10.69
6	....	....	....	1	7	5	4	....	9	8	....	1	13.99
4	1	....	....	1	6	5	4	....	9	7	1	1	11.47
14	2	....	1	1	18	10	19	....	29	26	3	....	12.34
3	3	3	2	1	12	12	11	....	23	18	2	3	15.72
51	5	3	5	4	68	70	62	3	135	111	19	5	18.09
7	4	....	2	....	13	12	12	....	24	15	1	8	14.17
5	....	....	....	....	5	6	8	....	14	12	....	2	23.97
1	....	....	....	1	2	5	2	....	7	4	....	3	21.02
6	....	....	....	....	6	8	5	....	13	13	....	....	27.31
5	....	1	....	1	7	9	20	....	29	28	1	....	29.41
....	....	....	....	....	....	1	1	....	2	2	....	....	15.50
4	....	....	....	....	4	3	7	..	10	7	1	2	25.06
....	....	....	....	....	....	4	5	....	9	8	....	1	26.70
5	....	....	....	....	5	2	2	....	4	2	....	2	14.81
14	....	....	1	1	16	18	11	....	29	27	2	....	18.04
11	4	1	....	1	17	2	8	....	10	9	1	....	10.01
13	....	1	....	1	15	19	13	....	32	24	4	4	14.89
1	....	....	....	....	1	17	15	1	* 33	14	1	18	36.54
14	1	1	....	3	19	11	23	2	36	26	4	6	13.93
188	21	11	12	18	250	248	271	6	525	422	41	62	17.66

* At county almshouse, 8.

TABLE NO. III.

SULLIVAN

TOWNS.	Population in 1890.	Births.									
		Sex.					Parentage.				
		Male.	Female.	Not stated.	Total.	Rate per 1,000.	Both American.	Both foreign.	American mother and for'n father.	American father and for'n mother	Not stated.
Acworth	721	3	2	..	5	6.93	4	...	....	1	..
Charlestown ..	1,467	2	13	..	15	10.22	13	...	....	1	1
Claremont	5,548	62	48	..	110	19.82	59	34	11	3	3
Cornish	953	6	6	..	12	12.59	11	...	1	....	..
Croydon	511	8	4	..	12	23.48	10	...	....	1	1
Goshen	384	2	5	..	7	18.22	5	...	....	1	1
Grantham.....	424	3	6	..	9	21.22	7	...	1	....	1
Langdon.....	308	4	....	..	4	12.98	4	...	....	....	..
Lempster.....	519	6	6	..	12	23.12	8	1	1	2	..
Newport.....	2,612	26	20	..	46	17.61	37	4	2	3	..
Plainfield.....	1,172	9	7	..	16	13.65	14	...	....	....	2
Springfield....	547	5	4	..	9	16.45	8	...	....	1	..
Sunapee	902	5	3	..	8	8.86	5	2	....	....	1
Unity.....	653	6	3	..	9	13.78	9	...	....	....	..
Washington...	565	9	4	..	13	23.00	9	1	2	1	..
Total	17,286	156	131	..	287	16.60	203	42	18	14	10

— *Continued.*

COUNTY.

Marriages.						Deaths.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death rate per 1,000.
5	....	....	....	...	5	8	11	....	19	17	1	1	26.35
15	1	....	....	1	17	14	12	....	26	19	2	5	17.72
38	4	6	4	2	54	45	49	....	94	78	13	3	16.94
5	....	1	....	...	6	9	10	....	19	19	....	...	19.93
5	....	....	....	...	5	3	7	....	10	8	1	1	19.56
2	....	....	....	...	2	3	6	....	9	7	1	1	23.43
7	....	....	....	1	8	3	5	....	8	7	....	1	18.86
2	....	....	....	...	2	1	4	....	5	5	....	...	16.23
3	....	....	1	...	4	3	11	....	14	13	1	...	26.97
21	1	....	1	1	24	20	26	....	46	39	3	4	17.61
5	....	1	....	1	7	8	5	....	13	12	....	1	11.09
1	....	....	....	...	1	5	8	....	13	13	....	...	23.76
4	1	....	....	1	6	8	6	....	14	12	2	...	15.52
6	....	1	...	1	8	9	9	....	18	11	2	5	27.56
4	....	....	....	1	5	4	2	....	6	6	....	...	23.00
123	7	9	6	9	154	143	171	....	314	266	26	22	18.16

TABLE NO. III.

GRAFTON

TOWNS.	Population in 1890.	Births. Sex. Male.	Female.	Not stated.	Total.	Rate per 1,000.	Parentage. Both American.	Both foreign.	American mother and for'n father.	American father and for'n mother.	Not stated.
Alexandria	679	1	9	..	10	14.72	7	...	...	...	3
Ashland	1,190	18	10	..	28	23.52	14	5	1	...	8
Bath	930	12	8	..	20	21.50	15	1	2	1	1
Benton	245	3	...	..	3	12.24	1	2	...	...	..
Bethlehem	1,265	16	17	2	35	27.66	19	10	4	1	1
Bridgewater	332	2	6	..	8	24.09	8	...	...	...	..
Bristol	1,521	14	14	..	28	18.50	13	2	...	...	13
Campton	984	9	6	..	15	15.24	14	...	...	...	1
Canaan	1,426	19	9	2	30	21.03	23	1	3	1	2
Dorchester	379	4	2	..	6	15.83	5	1	...	...	..
Easton	250	2	3	..	5	20.00	5	...	...	...	..
Ellsworth	150	4	2	..	6	40.00	5	...	1	...	..
Enfield	1,437	11	4	..	15	10.43	10	1	1	2	1
Franconia	596	5	1	..	6	10.06	6	...	...	...	..
Grafton	786	4	5	1	10	12.72	9	...	...	...	1
Groton	466	7	6	..	13	27.89	12	1	...	...	..
Hanover	1,807	15	14	..	29	16.04	23	3	...	3	..
Haverhill	2,669	22	43	2	67	25.10	54	5	6	2	..
Hebron	245	3	6	..	9	36.73	7	...	...	...	2
Holderness	594	6	3	..	9	15.15	9	...	...	...	..
Landaff	501	4	2	..	6	11.97	3	...	2	1	..
Lebanon	3,775	37	22	1	60	15.89	41	6	6	6	1
Lincoln	111	...	1	..	1	9.00	1	...	...	...	..
Lisbon	2,060	16	14	..	30	14.56	20	3	5	1	1
Littleton	3,361	44	42	1	87	12.13	38	28	14	7	..
Livermore	155	...	...	..	...	...	...	...	...	...	..
Lyman	542	2	2	..	4	7.38	4	...	...	...	..
Lyme	1,152	4	12	1	17	14.75	14	...	...	2	1
Monroe	477	6	4	..	10	20.96	8	1	...	...	1
Orange	245	6	...	..	6	24.48	6	...	...	...	..
Orford	913	13	8	..	21	23.00	19	1	1	...	..
Piermont	707	7	2	..	9	12.72	8	...	1	...	..
Plymouth	1,852	11	14	..	25	13.49	23	1	...	1	..
Rumney	947	10	8	..	18	19.00	15	...	2	1	..
Thornton	637	8	10	..	18	28.25	12	2	3	1	..
Warren	860	5	6	..	11	12.79	8	2	...	...	1
Waterville	39	...	1	..	1	25.64	1	...	...	...	..
Wentworth	698	6	6	..	12	17.19	12	...	...	...	..
Woodstock	351	3	4	..	7	19.94	6	...	1	...	..
Total	37,334	359	326	10	695	18.61	498	76	53	30	38

— *Continued.*

COUNTY.

Marriages.					Deaths.							
						Sex.			Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death rate per 1,000.
5					5	6	5		11	10		1	16.21
9	1				10	10	6		16	10	4	2	13.44
9		1	2	3	15	9	6		15	12		3	16.06
1		1		2	4	2	3		5	5			20.40
9				2	11	10	8		18	14	2	2	14.22
4					4	5	1		6	6			18.07
6		1			7	15	20		35	23		12	23.01
9	1				10	11	14		25	23		2	25.40
15				3	18	13	14		27	22	3	2	18.93
3	1				4	2	5		7	6		1	18.46
1				1	2		2		2	2			8.00
				1	1	3	2		5	4	1		33.33
8	1	2	1		12	8	19		27	22	3	2	18.78
5				1	6	5	6		11	9		2	18.45
4					4	9	8		17	14	1	2	21.62
1					1	3	2		5	3		2	10.72
11	1	3		1	16	14	25		39	37	2		21.58
11	2		3	1	17	22	18		*40	25	2	13	14.98
1					1	3	5		8	5		3	32.65
2					2	6	3		9	9			15.15
4	1		2		7	5	4		9	8		1	17.96
22	1		4	1	28	15	22		37	35	2		9.80
		1			1		1		1	1			9.00
18			2	2	22	12	13		25	23	2		12.13
22	6	2	11	4	45	28	18		46	35	4	7	13.68
...	...	...	...	...	...	...	...	...	...	...	...	...	...
4					4	5	9		14	13	1		25.83
6					6	13	14		27	26	1		23.43
3					3	4	4		8	8			16.77
4					4	1	2		3	3			12.24
8		1			9	17	12		29	26		3	31.76
7					7	5	2		7	7			9.90
20			1	2	23	12	9		21	19	1	1	11.33
5			1		6	12	10		22	20	1	1	23.23
6			1		7	4	8		12	9		3	18.83
5					5	3	7		10	9		1	11.62
...	...	...	...	...	...	...	...	...	...	...	...	...	...
6				1	7	12	5		17	12		5	24.35
8			1		9	3	6		9	8		1	25.64
262	15	12	29	25	343	307	318		625	523	30	72	16.74

* At county almshouse, 4.

TABLE NO. III.

COÖS

TOWNS.	Population in 1890.	Births. Sex. Male.	Female.	Not stated.	Total.	Rate per 1,000.	Parentage. Both American.	Both foreign.	American mother and for'n father.	American father and for'n mother.	Not stated.
Berlin	3,705	64	67	..	131	35.35	17	101	4	9	...
Cambridge	31	....	....	....	....	....	....	....	....	....	...
Carroll	822	6	4	..	10	12.16	5	4	1	....	...
Chandler's P'r.	15	....	....	....	....	....	....	....	....	....	...
Clarksville	327	2	4	..	6	18.34	3	...	....	2	1
Colebrook	1,736	16	14	..	30	17.28	16	2	4	4	4
Columbia	602	4	5	..	9	14.95	5	...	2	2	...
Dalton	597	6	6	..	12	20.10	8	1	2	....	1
Dixville	11	....	....	....	....	....	....	....	....	....	...
Dummer	455	....	....	1	1	2.19	....	....	....	....	1
Errol	178	4	3	..	7	39.32	5	...	....	1	1
Gorham	1,701	27	20	..	47	27.63	16	21	6	4	...
Green's Grant.	30	....	....	....	....	....	....	....	....	....	...
Jefferson	1,060	9	5	..	14	13.20	7	3	1	2	1
Lancaster	3,384	29	21	..	50	14.77	28	12	5	2	3
Martin's Loc'n.	5	....	....	....	....	....	....	....	....	....	...
Milan	1,028	14	13	..	27	26.26	12	7	3	4	1
Millsfield	62	1	1	..	2	32.58	....	....	....	1	1
N'thumberl'd.	1,351	11	14	..	25	18.50	16	5	2	1	1
Pink'm's Grant	8	....	....	....	....	....	....	....	....	....	...
Pittsburg	669	2	2	..	4	5.97	1	...	....	....	3
Randolph	136	....	....	....	....	....	....	....	....	....	...
Sec. Coll. Gr'nt	13	....	....	....	....	....	....	....	....	....	...
Shelburne	334	1	2	..	3	8.98	1	1	....	1	...
Stark	703	12	5	..	17	24.18	4	6	1	3	3
Stewartstown	1,006	3	4	..	7	6.95	4	...	2	1	...
Stratford	1,133	13	14	..	27	23.83	12	7	1	4	3
Wentworth's L	25	....	....	....	....	....	....	....	....	....	...
Whitefield	2,037	31	35	..	66	32.40	22	31	9	4	...
Total	23,164	255	239	1	495	21.36	182	201	43	45	24

— *Continued.*

COUNTY.

Marriages.						Deaths.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death rate per 1,000.
7	21	2	8	...	38	42	36	1	79	56	20	3	21.31
...	...	...	...	...	...	...	1	...	1	...	...	1	32.25
1	1	...	3	...	5	10	3	...	13	5	6	2	15.81
...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	...	2	...	...	4	4	1	...	5	2	...	3	15.29
6	2	2	3	...	13	9	15	...	24	18	3	3	13.82
1	...	2	...	1	4	6	4	...	10	8	1	1	16.61
4	1	...	...	...	5	6	5	...	11	8	1	2	18.42
...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	...	1	...	1	5	1	2	1	4	...	...	4	8.79
2	...	...	...	...	2	2	...	...	2	1	1	...	11.23
11	3	1	4	2	21	5	2	...	7	6	1	...	4.11
...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	3	...	1	2	10	4	7	...	11	9	...	2	10.37
19	5	1	1	1	27	14	22	...	36	23	3	10	10.63
...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	1	1	...	1	10	8	6	...	14	13	1	...	13.61
...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	1	1	1	2	11	8	14	...	22	19	2	1	16.28
...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	...	...	4	3	4	...	7	3	...	4	10.47
1	...	...	...	...	1	1	1	...	2	1	...	1	14.70
...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	...	1	5	4	1	...	5	4	...	1	13.43
8	1	1	1	1	12	9	3	...	12	9	...	3	17.06
4	1	2	...	1	8	10	8	...	18	5	1	12	17.89
8	3	3	1	...	15	8	12	...	20	17	2	1	17.63
...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	4	1	3	1	15	27	18	...	45	38	6	1	22.09
108	47	20	26	14	215	181	165	2	348	245	48	55	15.02

TABLE NO. III.

RECAPITULATION

COUNTIES.	Population in 1890.	Births.									
		Sex.					Parentage.				
		Male.	Female.	Not stated.	Total.	Rate per 1,000.	Both American.	Both foreign.	American mother and for'n father.	American father and for'n mother.	Not stated.
Rockingham	49,728	399	343	10	752	15.11	498	130	38	54	32
Strafford....	38,439	366	329	10	705	18.34	325	273	47	44	16
Belknap	20,285	164	162	2	328	16.16	171	94	22	27	14
Carroll	18,111	127	125	8	260	14.35	197	19	15	10	19
Merrimack .	49,401	473	439	9	921	18.64	481	271	71	72	26
Hillsborough	93,131	946	958	19	1,923	20.64	658	917	126	127	95
Cheshire ...	29,728	298	241	7	546	18.36	342	117	28	31	28
Sullivan	17,286	156	131	..	287	16.60	203	42	18	14	10
Grafton	37,334	359	326	10	695	18.61	498	76	53	30	38
Coös	23,164	255	239	1	495	21.36	182	201	43	45	24
Total ...	376,607	3,543	3,293	76	6,912	18.35	3,555	2,140	461	454	302

— *Continued.*

BY COUNTIES.

Marriages.						Deaths.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death rate per 1,000.
370	48	23	21	22	484	422	448	5	875	703	64	108	17.58
234	74	33	16	20	377	322	366	3	691	543	105	43	17.97
132	20	10	10	14	186	201	188	..	389	319	26	44	19.17
155	4	9	6	2	176	150	146	2	298	274	3	21	16.45
294	56	27	21	25	423	428	455	8	891	755	74	62	18.03
463	325	114	90	21	1,013	851	861	28	1,740	1,333	317	90	18.68
188	21	11	12	18	250	248	271	6	525	422	41	62	17.66
123	7	9	6	9	154	143	171	..	314	266	26	22	18.16
262	15	12	29	25	343	307	318	..	625	523	30	72	16.74
108	47	20	26	14	215	181	165	2	348	245	48	55	15.02
2,329	617	268	237	170	3,621	3,253	3,389	54	6,696	5,383	734	579	17.77

BIRTHS.

TABLE NO. IV.

Births by Counties, showing Proportion of Males to Females, 1889.

COUNTIES.	Males.	Females.	Excess of Males.	Excess of Females.	Sex not stated.
Rockingham	399	343	56	.....	10
Strafford	366	329	37	.....	10
Belknap	164	162	2	.....	2
Carroll	127	125	2	.....	8
Merrimack	473	439	34	.....	9
Hillsborough	946	958	.....	12	19
Cheshire	298	241	57	.....	7
Sullivan	156	131	25	.....	.....
Grafton	359	326	33	.....	10
Coös	255	239	16	.....	1
Total	3,543	3,293	250	12	76

TABLE NO. V.

Twin Births by Months and Counties, 1889.

COUNTIES.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	Colored Children.	
														M.	F
Rockingham	..	1	..	..	..	..	..	..	1	..	1	2	5	1	....
Strafford	..	..	..	..	..	..	..	1	..	2	..	..	3	....	....
Belknap	..	..	..	1	1	1	1	..	..	..	1	2	7	....	....
Carroll	..	1	..	..	..	..	..	..	..	1	..	1	3	....	....
Merrimack *	..	2	1	1	..	1	1	3	1	1	1	2	14	1	2
Hillsborough	1	1	2	5	3	1	1	2	..	3	1	.	20	....	....
Cheshire	..	..	..	..	1	..	..	..	..	..	..	..	1	....	....
Sullivan	..	..	..	..	..	..	..	..	1	..	..	..	1	....	....
Grafton	2	..	..	2	1	..	..	..	1	..	1	1	8	1	1
Coös	..	..	1	..	..	..	..	1	..	1	1	1	5	....	....
Total	3	5	4	9	6	3	3	7	4	8	6	9	67	3	3

* Triplets in Merrimack county.

TABLE

Births by Sex and

COUNTIES.		January.	February.	March.	April.	May.
Rockingham	Males	34	30	38	38	45
	Females	24	21	25	35	34
	Not stated	2	.....	.....	3	.....
Strafford	Males	24	26	26	25	33
	Females	25	26	25	34	24
	Not stated	1	1	.....	.....	1
Belknap	Males	9	14	15	19	17
	Females	14	9	13	12	13
	Not stated	.....	.....	1	.....	.....
Carroll	Males	11	7	13	15	12
	Females	5	11	13	8	9
	Not stated	.....	.....	1	.....	1
Merrimack	Males	36	40	45	34	34
	Females	34	36	46	40	39
	Not stated	3	1	.....	1	2
Hillsborough	Males	84	58	82	71	86
	Females	71	75	84	83	90
	Not stated	2	1	2	2	3
Cheshire	Males	17	15	30	27	25
	Females	29	20	12	24	23
	Not stated	.....	.....	.....	1	1
Sullivan	Males	13	11	17	18	12
	Females	13	11	14	11	12
	Not stated	.....	.....	.....	.....	.....
Grafton	Males	24	27	30	35	22
	Females	31	22	33	27	30
	Not stated	.....	.....	1	.....	1
Coös	Males	22	19	24	20	21
	Females	26	23	21	22	16
	Not stated	.....	.....	.....	.....	.....
Total	Males	274	247	320	302	307
	Females	272	254	286	296	290
	Not stated	8	3	5	7	9
Grand total		554	504	611	605	606

NO. VI.

Month, by Counties, 1889.

June.	July.	August.	September.	October.	November.	December.	Not stated.	Total.	Grand total.
21	33	28	34	25	29	44	.....	399	
21	34	44	25	29	29	22	.....	343	
.....	1	1	1	.....	1	1	.....	10	752
30	32	41	35	42	27	25	.....	366	
23	30	29	35	29	27	22	.....	329	
1	2	.....	1	1	1	1	.....	10	705
15	16	11	19	8	11	10	.....	164	
11	14	17	7	19	21	12	.....	162	
.....	.....	.....	.....	1	.....	.....	.....	2	328
8	8	12	11	13	12	5	.....	127	
21	10	12	6	11	11	8	.....	125	
2	.....	1	2	.....	1	.....	.....	8	260
43	44	46	45	32	34	40	.....	473	
38	40	38	33	36	22	37	....	439	
.....	.....	1	.....	.....	1	.....	.....	9	921
86	81	60	80	88	96	74	.....	946	
56	68	92	88	96	82	73	.....	958	
.....	2	2	.....	.....	3	2	.....	19	1,923
21	29	22	23	36	25	28	.....	298	
14	25	25	25	17	20	7	.....	241	
.....	.....	1	.....	1	.....	3	.....	7	546
15	10	11	19	11	11	8	.....	156	
8	8	14	16	11	6	7	.....	131	
.....	.....	.....	.....	.....	.....	.....	.....	.....	287
18	33	34	48	29	24	35	.....	359	
29	23	40	23	25	27	16	.....	326	
3	.....	2	2	1	.....	.....	.....	10	695
17	24	27	25	33	14	9	.....	255	
15	24	26	16	21	15	14	.....	239	
.....	.....	.....	.....	.....	.....	1	.....	1	495
274	310	292	339	317	283	278	.....	3,543	
236	276	337	274	294	260	218	.....	3,293	
6	5	8	6	4	7	8	.....	76	6,912
516	591	637	619	615	550	504	.....	6,912	6,912

MARRIAGES.

TABLE NO. VII.

Marriages by Counties and Nativity, 1889.

COUNTIES.	Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.
Rockingham	370	48	23	21	22	484
Strafford	234	74	33	16	20	377
Belknap	132	20	10	10	14	186
Carroll	155	4	9	6	2	176
Merrimack	294	56	27	21	25	423
Hillsborough	463	325	114	90	21	1,013
Cheshire	188	21	11	12	18	250
Sullivan	123	7	9	6	9	154
Grafton	262	15	12	29	25	343
Coös	108	47	20	26	14	215
Total	2,329	617	268	237	170	3,621

TABLE NO. VIII.

Marriages by Months and Counties, 1889.

COUNTIES.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Not stated.	Total.
Rockingham ..	43	22	28	30	29	52	35	35	43	56	59	52	..	484
Strafford.....	25	18	27	31	34	33	29	33	34	38	31	44	..	377
Belknap	19	13	13	12	17	18	13	15	14	12	23	17	..	187
Carroll	7	11	16	13	10	16	17	11	11	12	28	21	3	176
Merrimack ...	36	23	19	23	34	42	30	36	45	32	59	42	2	423
Hillsborough..	89	70	70	65	98	102	80	79	97	98	101	63	1	1,013
Cheshire	18	16	17	25	23	27	14	24	14	28	24	17	3	250
Sullivan	6	8	17	10	13	11	15	6	13	18	16	21	..	154
Grafton	27	21	21	26	37	22	23	26	31	25	44	34	6	343
Coös	13	10	12	20	11	19	14	17	19	32	24	15	9	215
Total.....	283	212	240	255	306	342	270	282	321	351	409	326	24	3,621

TABLE NO. IX.

Marriages by Ages and Counties, 1889.

COUNTIES.		Under 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 70.	70 to 80.	Over 80.	Not stated.	Total.
Rockingham	Males	...	22	170	122	60	42	14	17	9	10	10	1	1	6	484
	Females	1	104	190	93	29	23	17	11	3	3	3	...	...	7	484
Strafford	Males	...	18	150	104	35	27	15	9	1	3	10	2	...	3	377
	Females	...	102	150	53	27	20	8	2	7	2	3	...	...	3	377
Belknap	Males	...	6	68	43	21	15	11	6	6	3	5	1	...	1	186
	Females	...	43	62	30	23	10	6	2	3	1	4	...	...	2	186
Carroll	Males	...	3	72	40	19	14	10	1	2	4	8	2	...	1	176
	Females	...	61	66	16	9	8	5	2	5	1	...	1	1	1	176
Merrimack	Males	...	25	155	108	50	31	17	11	10	6	6	3	...	1	423
	Females	1	109	168	62	36	14	16	5	2	4	3	...	...	3	423
Hillsborough	Males	...	54	425	259	104	56	40	22	21	12	13	4	1	2	1,013
	Females	2	241	429	172	77	38	19	11	8	3	7	...	...	6	1,013
Cheshire	Males	...	9	88	88	25	9	9	5	5	2	5	2	2	1	250
	Females	1	79	78	38	17	15	8	4	2	2	2	1	...	3	250

Sullivan	Males		6	51	46	18	12	4	5	2	3	6	1	...	.....	154
	Females	1	41	53	29	7	4	8	5	4	.....	2	.....	...	....	154
Grafton	Males	. .	9	126	91	44	23	14	9	7	7	8	4	...	1	343
	Females	4	117	107	56	23	10	9	4	4	2	6	.....	...	1	343
Coös	Males		6	87	67	25	10	6	4	3	3	2	.....		2	215
	Females	2	68	88	31	10	8	1	1	1	1	2	.....		2	215
Total	Males		158	1,392	968	401	239	140	89	66	53	73	20	4	18	3,621
	Females	12	965	1,391	580	258	150	97	47	39	19	32	2	1	28	3,621
Grand Total		12	1,123	2,783	1,548	659	389	237	136	105	72	105	22	5	46	7,242

TABLE NO. X.

Interesting Facts in relation to Marriages, 1889.

COUNTIES.	Instances in which the age of the bride exceeded that of the groom.	Widowers.	Widows.	Third marriage.		Fourth marriage.		Fifth marriage.		Sixth marriage.	Oldest.		Youngest.		Oldest couple.		Youngest couple.		Divorced.	
				M.	F.	M.	F.	M.	F.	M.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Rockingham	71	89	60	8	3	1	..	..	1	..	82	67	17	14	82	58	17	15	..	1
Strafford	84	59	44	5	3	2	..	..	..	..	72	65	16	16	72	60	18	16	..	..
Belknap	39	34	25	7	1	..	..	..	..	..	70	65	17	17	70	65	18	17	3	7
Carroll	22	24	18	4	1	1	..	..	..	..	74	83	18	15	63	83	18	16	..	..
Merrimack	68	70	44	8	5	2	2	..	..	1	75	65	18	14	75	65	18	16	1	2
Hillsborough	149	139	119	16	4	..	2	1	..	..	84	63	15	14	84	63	15	14	2	2
Cheshire	43	38	33	2	2	3	..	..	..	..	83	75	18	14	83	75	18	16	1	1
Sullivan	27	32	23	1	2	..	..	..	..	..	72	65	18	14	72	65	18	19	4	..
Grafton	47	60	53	8	4	1	..	..	..	..	78	68	16	13	78	68	16	15	2	4
Coös	24	21	27	6	1	..	..	..	..	..	69	64	19	14	69	64	19	16	..	1
Total	574	566	446	65	26	10	4	1	1	1	84	83	15	13	83	75	15	14	13	18

DIVORCES.

TABLE NO. XI.

Divorces decreed by the Supreme Court of New Hampshire, in the year 1889, *as returned by the Clerks of the several Counties.*

COUNTIES.	Causes of Divorce.																	Libellants.		
	Abandonment.	Abandonment and adultery.	Absent three years.	Adultery.	Conviction for crime and imprisonment.	Extreme cruelty.	Extreme cruelty and adultery.	Extreme cruelty and habitual drunkenness.	Extreme cruelty, drunkenness, and adultery.	Habitual drunkenness.	Impotency.	Joining religious sect and refusal to cohabit.	Treatment injurious to health.	Treatment injurious to health and ex. cruelty.	Treatment injurious to health and to reason.	Willing absence three years.	Males.	Females.	Total of each county.
Rockingham	16			15		6		1		3						2	17	26	43
Strafford	16			4		14				2							9	27	36
Belknap	10			8	1	6										2	11	16	27
Carroll	8			7		3				1						1	10	10	20
Merrimack	11			9		13				2	3					4	13	29	42
Hillsborough	33	1	1	16		20	2	2	1	7			1	1	1	1	25	62	87
Cheshire	14			3		3		5		4			2				12	19	31
Sullivan	1			4		7				1		1	1			3	5	13	18
Grafton	7			16		14				2							16	23	39
Coös	7		1	5		12											7	18	25
Total	123	1	2	87	1	98	2	8	1	22	3	1	4	1	1	13	125	243	368

TABLE

Causes upon which Divorces were decreed for eight

COUNTIES.	Abandonment.	Abandonment and adultery.	Absent three years.	Absent three years and abandonment.	Adultery.	Conviction of crime and imprisonment.	Desertion and bigamy.	Extreme cruelty.	Extreme cruelty and abandonment.	Extreme cruelty and adultery.	Extreme cruelty and habitual drunkenness.
Rockingham	103	...	1	....	51	4	..	71	...	..	1
Strafford	83	...	14	....	70	1	1	93	....	..	....
Belknap	40	...	11	....	47	2	..	51	....	..	....
Carroll	48	...	3	....	28	2	..	23	....	..	1
Merrimack	104	...	20	....	73	3	..	114	....	..	....
Hillsborough	246	1	15	....	151	6	..	209	1	4	6
Cheshire	94	1	1	1	44	...	..	62	1	3	6
Sullivan	43	...	...	....	47	....	..	49	....	..	....
Grafton	91	...	...	....	57	1	..	72	....	..	....
Coös	23	...	7	....	35	1	..	41	....	..	....
Total	875	2	72	1	603	20	1	785	2	7	14

NO. XII.

years, 1882 *to* 1889, *inclusive, by Counties.*

Extreme cruelty, habitual drunkenness, and adultery.	Habitual drunkenness.	Habitual drunkenness and adultery.	Habitual drunkenness and desertion.	Impotency.	Joining religious sect and refusal to cohabit.	Nullity.	Prior marriage.	Refusal to cohabit.	Treatm'nt injurious to health.	Treatm'nt injurious to health and extreme cruelty.	Treatm'nt injurious to health and to reason.	Treatm'nt injurious to reason.	Willing absence three years.	Willing absence and refusal to cohabit.	No cause assigned.	Total.
....	36	....	....	1	....	..	....	....	3	....	....	..	3	....	....	274
....	30	....	....	1	....	1	..	1	1	....	....	..	....	....	....	296
....	16	....	....	....	....	..	....	....	1	....	....	..	2	....	....	170
....	9	....	....	1	....	..	....	....	....	....	....	..	1	....	....	116
....	37	....	....	4	....	..	....	....	3	....	....	2	4	....	2	366
1	47	2	1	....	....	..	....	....	6	1	1	..	1	1	....	700
....	13	....	....	....	....	..	1	..	5	....	....	..	....	....	....	232
....	3	....	....	1	1	..	....	....	1	....	....	..	4	....	....	149
....	13	....	....	....	....	..	....	....	1	....	....	..	....	....	....	235
....	6	....	....	....	....	..	....	....	....	....	....	..	3	....	....	116
1	210	2	1	8	1	1	1	1	21	1	1	2	18	1	2	2,654

TABLE

CAUSES OF DEATH, ARRANGED

CLASS I.—

ORDER 1. — Miasmatic.

TOWNS IN ROCKINGHAM COUNTY.	Carbuncle.	Cholera, Asiatic.	Cholera, Sporadic.	Cholera Infantum.	Cholera Morbus.	Croup (Pseudo-membranous).	Diphtheria.	Diarrhœa.	Dysentery.	Erysipelas.	Fever, Bilious.	Fever, Cerebro-spinal.	Fever, Intermittent.	Fever, Malarial.	Fever, Typhoid.	Fever, Typho-malarial.	Fever, Unspecified.	Fever, Yellow.	Influenza (Epidemic).	Measles.	Mumps.	Metria (Puerperal Fever).	Pertussis.
Atkinson						1									1								
Auburn						1			1														
Brentwood				1				1	1														
Candia						1					1												
Chester									1						1								
Danville																							
Deerfield										1					1								
Derry				3			2		3						4		1						
East Kingston							3																
Epping				1		1	1			1													
Exeter				3			1								3								
Fremont				1	1		1		2														
Greenland							3																
Hampstead				2																			
Hampton				2											1								
Hampton Falls																							
Kensington																							
Kingston									1														
Londonderry																							2
Newcastle								1	1			1											
Newington							2																
Newmarket				6		1		1									1						
Newton																							1
N. Hampton										1													
Northwood				1																			
Nottingham																							
Plaistow				2																			
Portsmouth				9			8	4	1	1		3			1								2
Raymond				2																			
Rye																							
Salem				3																1			
Sandown																							
Seabrook				3			1																
S. Hampton																							
S. Newmarket				1																			
Stratham																							
Windham																							

NO. XIII.

BY TOWNS AND COUNTIES.

ZYMOTIC DISEASES.

						Order 2. — Enthetic.									Order 3. — Dietic.					Order 4. — Parasitic.					Total for Class 1.		
Tonsilitis.	Scarlatina.	Small-pox.	Varicella.	Total. M.	Total. F.	Glanders.	Gonorrhea.	Hydrophobia.	Malignant Pustule.	Septicæmia.	Syphilis.	Total. M.	Total. F.	Alcoholism.	Delirium Tremens.	Inanition.	Purpura and Scurvy.	Total. M.	Total. F.	Aphthæ.	Worms.	Other Parasites.	Total. M.	Total. F.	Male.	Female.	Sex not stated.	Total.
..	1	..	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	3
..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2
..	..	..	..	..	2	..	..	..	..	2	..	2	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	4
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2
..	..	..	..	5	8	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	8	..	13
..	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	3
..	..	..	..	2	2	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	2	3	..	5
..	..	..	..	4	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	3	..	7
..	..	..	..	4	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	1	..	5
..	..	..	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2
..	..	..	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	3
..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2
..	..	..	..	3	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	6	..	9
..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	1	1	..	2
..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	..	18	11	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	19	11	..	30
..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
..	..	..	..	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	4
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
..	..	..	..	3	1	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	3	2	..	5
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...

TABLE NO. XIII.

TOWNS IN ROCKINGHAM COUNTY.	CLASS II.—CONSTITUTIONAL DISEASES.																						
	ORDER 1.—Diathetic.													ORDER 2.—Tubercular.							Total for Class II.		
	Gout.	Dropsy.	Anæmia.	Cancer, Various.	Cancer of Breast.	Cancer of Stomach.	Cancer of Uterus.	Noma (Canker).	Mortification.	Rheumatism.			Scrofula.	Tabes Mesenterica.	Phthisis.	Hydrocephalus.	Tubercular Meningitis.			Male.	Female.	Total.
											M.	F.						M.	F.			
Atkinson		1									1					1		1		2		2
Auburn		1									1				1		1	1	1	2	1	3
Brentwood		2		1						1	2	2			4			1	3	3	5	8
Candia					1							1			1			1		1	1	2
Chester															3			1	2	1	2	3
Danville										1	1									1		1
Deerfield										1	1		1		5			3	3	4	3	7
Derry		1				1				2		4			2				2		6	6
East Kingston		1									1				5			3	2	4	2	6
Epping				1		1	1			1	1	3			6	1		4	3	5	6	11
Exeter				4					1			5			5			4	1	4	6	10
Fremont															2				2		2	2
Greenland																						
Hampstead		2									1	1			1			1		2	1	3
Hampton		1		1							2				2			2		4		4
Hampton Falls															1				1		1	1
Kensington			1									1			2			2		2	1	3
Kingston				1								1			1			1		1	1	2
Londonderry			1									1					1		1		2	2
Newcastle																						
Newington																						
Newmarket		4		1					1		3	3		1	9	3		3	10	6	13	19
Newton															1				1		1	1
North Hampton																						
Northwood		1										1			3			1	2	1	3	4
Nottingham				1							1			1	2			2	1	3	1	4
Plaistow																						
Portsmouth		1		2			1			1	3	2	3	2	15	1	1	12	10	15	12	27
Raymond		1		1								2			6	1		3	4	3	6	9
Rye				1			1					2			1				1		3	3
Salem															1			1		1		1
Sandown				1								1			1			1		1	1	2
Seabrook				1		1			1		2	1		1	3			3	1	5	2	7
South Hampton																						
S. Newmarket															3			1	2	1	2	3
Stratham		1										1			1			1		1	1	2
Windham				1		1						2			1				1		3	3

— *Continued.*

CLASS III.—LOCAL DISEASES.

ORDER I.—Nervous System.												ORDER 2.—Circulatory System.					ORDER 3.—Respiratory System.									
Cephalitis.	Cerebritis.	Apoplexy.	Paralysis.	Insanity.	Chorea.	Epilepsy.	Tetanus.	Convulsions.	Brain Diseases.	Total.		Pericarditis.	Aneurism.	Heart Diseases.	Total.		Epistaxis.	Laryngitis.	Bronchitis, Acute.	Bronchitis, Chronic.	Pleurisy.	Pneumonia.	Asthma.	Lung Diseases.	Total.	
										M.	F.				M.	F.									M.	F.
														1	1							2			1	1
		1	1						1	1	2			1		1						2			1	1
		2	2							2	2			3	1	2						2			1	1
			1								1			1		1						3			2	1
			2							1	1			1		1						3			1	2
	1									1				1	1							1				1
		1		1		1			1	2	2			1	1				1			3			4	
		1	1								2			1	1							6			4	2
		1									1			1	1											
			4						1	1	2	4	1	4	2	3				1		4				5
2		4	2						3		1	10		13	8	5						3		1	1	3
			1									1														
						1	1					2		1		1						1				1
																						2			1	1
														1	1									1	1	
														1	1											
		1	1								1	1		1		1						1			1	
		1	2								1	2		3	1	2				1		3			1	3
			1									1		2		2										
		2								1	1	2		2	1	1					1	1			2	
1												1		1	1											
1			2							3	5	1		6	6							1		3	5	2
1		2	1						1		1	4		3	3											
									1			1		1	1				1							1
1	1		2							2	2	4		1		1						3			2	1
2											1	1		1		1						1				1
									1			1		1		1						1				1
4		14	7						3	11	15	24		15	10	5			4	1		12		2	9	10
		1	1								1	1		2	1	1										
		1	3								1	3		2	1	1					1	1			1	1
			1							1		2		3	2	1				1		2			2	1
														2	1	1										
1												1		2	1	1						2				2
														1	1											
		1									1											3			2	1
1											1			2		2						1			1	
		1				1					1	1		3	1	2			1			1			1	1

TABLE NO. XIII.

CLASS III.—LOCAL

ORDER 4.—Digestive Organs.

TOWNS IN ROCKINGHAM COUNTY.	Gastritis.	Enteritis.	Peritonitis.	Ascites.	Ulceration of Intestines.	Hernia.	Ileus.	Intussusception.	Stricture of Intestines.	Fistula.	Stomach Diseases.	Pancreas Diseases.	Hepatitis.	Jaundice.	Liver Diseases.	Spleen Diseases	Bowel Diseases.	Total. M.	Total. F.
Atkinson																			
Auburn																			
Brentwood																			
Candia																			
Chester															1				1
Danville																			
Deerfield	1																		1
Derry																			
East Kingston																			
Epping		1	1																2
Exeter	1	2	2										1					1	5
Fremont																			
Greenland		1	1				1											1	2
Hampstead	1																		1
Hampton																			
Hampton Falls											1							1	
Kensington																			
Kingston							1											1	
Londonderry																			
Newcastle																			
Newington																			
Newmarket															1				1
Newton											1								1
North Hampton			1															1	
Northwood																			
Nottingham																	1		1
Plaistow													1						1
Portsmouth	3	1	2				1				2			1	1			4	7
Raymond															1				1
Rye															1		2	1	2
Salem										1	2							2	1
Sandown															1			1	
Seabrook		2																1	1
South Hampton															1			1	
South Newmarket																			
Stratham																	1		1
Windham			1															1	

— *Continued.*

DISEASES. — *Continued.*

Order 5. — Urinary Organs.												Order 6 — Generative Organs.			Order 7. — Osseous and Locomotory System.					Order 8. — Integumentary System.					Total for Class III.			
Nephritis.	Ischuria.	Nephria (Bright's Disease).	Diabetes.	Calculus (Gravel, etc.).	Cystitis.	Prostate, Disease of.	Kidney Diseases.	Bladder, Diseases of.	Testicles, Disease of.	Total. M.	Total. F.	Ovarian Dropsy.	Diseases of Uterus.	Total.	Bones, Diseases of.	Joint Diseases.	Vertebræ, Diseases of.	Total. M.	Total. F.	Phlegmon.	Ulcer.	Skin Diseases.	Total. M.	Total. F.	Male.	Female.	Sex not stated.	Total.
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	1	..	..	..	..	..	..	3	5	..	8
..	..	..	1	..	..	..	1	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	5	6	..	11
..	..	2	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	3	..	7
..	..	1	1	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	5	..	9
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
..	..	2	..	..	..	..	1	..	..	1	2	..	..	..	1	..	..	1	..	..	..	..	..	..	9	5	..	14
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	4	..	9
..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	14	..	18
..	..	..	1	..	1	..	1	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	12	25	..	37
..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	6	..	7
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	3
..	..	2	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	3	1	..	4
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	4
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	7	..	11
..	..	..	1	..	..	..	2	..	..	2	1	..	..	..	..	..	..	..	..	1	..	..	..	1	2	5	..	7
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	3	..	7
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	16	4	..	20
..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	5	..	10
..	..	1	1	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	1	..	..	..	1	3	4	..	7
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	6	..	10
..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	4	..	6
..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	4	..	5
..	..	5	..	..	..	1	1	1	..	7	1	..	..	..	..	..	..	..	..	1	..	..	1	..	46	47	..	93
..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	2	4	..	6
..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	7	..	12
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	5	..	11
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
..	..	2	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	7	..	9
..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	2	..	5
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	3	..	5
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	4	..	8

TABLE NO. XIII.

CLASS IV. — DEVELOPMENTAL DISEASES.

TOWNS IN ROCKINGHAM COUNTY.	Order 1. — Of Children.									Order 2. — Of Women.			Orders 3 and 4.				Total for Class IV.		
	Still-born.	Debility, Infantile.	Debility, Premature Birth.	Cyanosis.	Spina Bifida.	Other Malformations.	Teething.	Inanition.	Total.		Childbirth.	Paramenia.	Total.	Old Age.		Atrophy and Debility.		Male.	Female.	Total.
									M.	F.				M.	F.	M.	F.			
Atkinson														1	1			1	1	2
Auburn														1	3			1	3	4
Brentwood			2						1	1				3	2	1	5	5	8	13
Candia	3							1	4		1		1	1	3			5	4	9
Chester														2	1		1	2	2	4
Danville		1								1				1				1	1	2
Deerfield						1				1						1		1	1	2
Derry								1	1					1	1			2	1	3
East Kingston	1								1					1				2		2
Epping	1		1					1	3						1			3	1	4
Exeter	4								2	2				1	4			3	6	9
Fremont			1						1									1		1
Greenland														1				1		1
Hampstead											1		1	2	4			2	5	7
Hampton														2				2		2
Hampton Falls														1				1		1
Kensington		1								1							1		2	2
Kingston	3	3							3	3						2	2	5	5	10
Londonderry		1						1	1	1					1			1	2	3
Newcastle								1	1					1				2		2
Newington	1								1						1			1	1	2
Newmarket	4								4		1		1		4			4	5	9
Newton	1		2						3						1			3	1	4
North Hampton								1	1							1		2		2
Northwood														1		1	1	2	1	3
Nottingham	2								1	1				1	1			2	2	4
Plaistow			1						1					1				2		2
Portsmouth	5		1					7	8	5				4	7	2	1	14	13	27
Raymond															1				1	1
Rye																				
Salem														1	2			1	2	3
Sandown			1						1									1		1
Seabrook						1			1						1			1	1	2
South Hampton															1				1	1
South Newmarket							1		1									1		1
Stratham														1				1		1
Windham															1				1	1

— *Continued.*

CLASS V. — VIOLENT DEATHS.

Order 1. — Accident and Negligence. Fractures and Contusions.	Wounds, Unspecified.	Burns and Scalds.	Poison.	Drowning.	Suffocation.	Various.	Total. M.	Total. F.	Order 2. Homicide. M.	Homicide. F.	Order 3. — Suicide. Wounds, Unspecified.	Wounds, Pistol or Gunshot.	Wounds, Knife.	Poison.	Drowning.	Hanging.	Otherwise.	Total. M.	Total. F.	Order 4. — Various. Violent, not Classed. M.	Violent, not Classed. F.	Cause not Reported. M.	Cause not Reported. F.	Total for Class V. Male.	Female.	Total.	Grand Total for all Classes. Male.	Female.	Not stated.	Total.
																						1	..	1	..	1	8	3	..	11
						1	1																1	1	1	2	8	11	..	19
																							1	..	1	1	14	22	..	36
						1	1																	1	..	1	13	8	..	21
						1	..	1																	1	1	9	12	..	21
																											4	2	..	6
						1	1										1	..	1			1	1	2	2	4	16	13	..	29
1							1															1	1	2	1	3	14	20	..	34
2							2																	2	..	2	11	5	..	16
																							1	..	1	1	14	25	..	39
																						2	1	2	1	3	25	41	..	66
																											6	4	..	10
																						1	..	1	..	1	5	7	..	12
																											5	10	..	15
																						1	..	1	..	1	12	2	..	14
																							1	..	1	1	3	2	..	5
					1			1																	1	1	4	6	..	10
						1	1																	1	..	1	11	14	..	25
																											4	10	..	14
																							1	..	1	1	7	6	..	13
						2	1	1																1	1	2	4	3	1	8
1				1			1	1														3	..	4	1	5	31	29	2	62
																											8	8	..	16
																											6	4	..	10
1								1														1	..	1	1	2	9	12	..	21
						1	1															1	1	2	1	3	8	9	1	18
					1	..	1																	1	..	1	5	5	..	10
1	..	..	1	2	..	3	6	1														3	7	9	8	17	102	91	1	194
																											7	11	..	18
						1	..	1																	1	1	5	11	..	16
																											10	9	..	19
																											4	2	..	6
																											11	12	..	23
																											2	2	..	4
																						1	..	1	..	1	6	5	..	11
						1	1										1	1						2	..	2	6	4	..	10
																						1	..	1	..	1	5	8	..	13

TABLE NO. XIII.

CLASS I. —

ORDER 1. — Miasmatic.

TOWNS IN STRAFFORD COUNTY.	Carbuncle.	Cholera, Asiatic.	Cholera, Sporadic.	Cholera Infantum.	Cholera Morbus.	Croup (Pseudo-membranous).	Diphtheria.	Diarrhea.	Dysentery.	Erysipelas.	Fever, Bilious.	Fever, Cerebro-spinal.	Fever, Intermittent.	Fever, Malarial.	Fever, Typhoid.	Fever, Typho-malarial.	Fever, Un-specified.	Fever, Yellow.	Influenza (Epidemic).	Measles.	Mumps.	Metria (Puerperal Fever).	Pertussis.
Barrington							3			1													1
Dover				5	2	10	39	6				2			2					1			
Durham							2								1		2						
Farmington				2						1					1								
Lee																							
Madbury								1															
Middleton										1													
Milton								2															
New Durham										1													
Rochester				2		3	1	1		1		2			3					1			2
Rollinsford				2	1	2	3																
Somersworth				25		9	6		1	2		1			6		3			1			5
Strafford															1								

— *Continued.*

ZYMOTIC DISEASES.

						Order 2.—Enthetic.								Order 3.—Dietic.						Order 4.—Parasitic.					Total for Class I.			
Tonsilitis.	Scarlatina.	Small-pox.	Varicella.	Total. M.	Total. F.	Glanders.	Gonorrhea.	Hydrophobia.	Malignant Pustule.	Septicæmia.	Syphilis.	Total. M.	Total. F.	Alcoholism.	Delirium Tremens.	Inanition.	Purpura and Scurvy.	Total. M.	Total. F.	Aphthæ.	Worms.	Other Parasites.	Total. M.	Total. F.	Male.	Female.	Sex not stated.	Total.
..	..	..	..	2	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	3	..	5
..	1	..	..	35	33	..	..	..	..	1	2	1	2	..	..	..	..	..	..	..	..	..	..	..	36	35	..	71
..	..	..	..	3	2	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	4	2	..	6
..	..	..	..	1	3	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	4	..	5
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
..	..	..	..	12	4	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	12	5	..	17
..	..	..	..	3	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	5	..	8
..	..	..	..	20	39	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	20	40	..	60
..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1

TABLE NO. XIII.

CLASS II. — CONSTITUTIONAL DISEASES.

TOWNS IN STRAFFORD COUNTY.	Order 1. — Diathetic.											Order 2. — Tubercular.							Total for Class II.		
	Gout.	Dropsy.	Anæmia.	Cancer, Various.	Cancer of Breast.	Cancer of Stomach.	Cancer of Uterus.	Noma (Canker).	Mortification.	Rheumatism.	Total.	Scrofula.	Tabes Mesenterica.	Phthisis.	Hydrocephalus.	Tubercular Meningitis.	Total.		Male.	Female.	Total.
											M. F.						M.	F.			
Barrington				1							1			1		1		2		3	3
Dover		4	14	2						1	8 13			26			7	19	15	32	47
Durham														1			1		1		1
Farmington		1		1							2		1	7			6	2	6	4	10
Lee														2			1	1	1	1	2
Madbury								1			1								1		1
Middleton														1				1		1	1
Milton														4			1	3	1	3	4
New Durham														2			1	1	1	1	2
Rochester		1		2		1			1	1	5 1		1	8		1	6	4	11	5	16
Rollinsford														5			3	2	3	2	5
Somersworth		3	1		1	1				1	5		1	17			6	12	7	17	24
Strafford			1				1		1	2	1			1		1		2	2	3	5

— *Continued.*

CLASS III. — LOCAL DISEASES.

ORDER 1. — Nervous System.												ORDER 2. — Circulatory System.						ORDER 3. — Respiratory System.								
Cephalitis.	Cerebritis.	Apoplexy.	Paralysis.	Insanity.	Chorea.	Epilepsy.	Tetanus.	Convulsions.	Brain Diseases.	Total.		Pericarditis.	Aneurism.	Heart Diseases.	Total.		Epistaxis.	Laryngitis.	Bronchitis, Acute.	Bronchitis, Chronic.	Pleurisy.	Pneumonia.	Asthma.	Lung Diseases.	Total.	
										M.	F.				M.	F.									M.	F.
..	..	1	3	..	..	1	..	..	1	..	6	..	..	2	1	1	..	..	..	..	1	1	..	..	..	2
4	4	2	3	1	..	..	..	3	8	11	14	1	..	13	8	6	..	1	4	2	..	5	..	..	6	6
..	..	..	..	..	..	..	..	..	1	1	..	..	..	1	..	1	..	..	..	..	..	..	..	1	1	..
1	1	1	1	..	..	..	..	..	2	3	3	1	..	3	2	2	..	..	..	..	..	6	..	..	5	1
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	3
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
..	..	..	..	1	..	..	..	..	..	1	..	..	..	2	2	..	..	..	..	..	..	..	..	..	..	..
1	..	3	..	..	..	..	..	..	..	3	1	1	..	..	1	..	..	..	..	1	..	..	..	..	..	1
..	..	..	1	..	..	..	..	..	..	..	1	..	..	2	1	1	..	..	..	..	..	3	..	..	1	2
5	..	3	4	..	..	..	..	3	1	9	7	..	..	9	5	4	..	..	4	..	..	6	2	1	3	10
..	..	2	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1	..	3	1	..	..	..	..	4	1	7	3	..	..	7	3	4	..	..	2	..	..	11	..	1	5	9
..	..	1	1	..	..	..	..	..	..	1	1	..	..	3	1	2	..	..	..	..	..	3	..	..	1	2

TABLE NO. XIII.

CLASS III. — LOCAL

ORDER 4. — Digestive Organs.

TOWNS IN STRAFFORD COUNTY.	Gastritis.	Enteritis.	Peritonitis.	Ascites.	Ulceration of Intestines.	Hernia.	Ileus.	Intussusception.	Stricture of Intestines.	Fistula.	Stomach Diseases.	Pancreas Diseases.	Hepatitis.	Jaundice.	Liver Diseases.	Spleen Diseases.	Bowel Diseases.	Total. M.	Total. F.
Barrington																			
Dover	1	4	1								1		1		5		1	7	7
Durham																			
Farmington						1							1						2
Lee																			
Madbury																			
Middleton			1												1			2	
Milton													1						1
New Durham		1	1												1			2	1
Rochester		1	1		1												1	2	2
Rollinsford	1																		1
Somersworth	1												1		1			1	2
Strafford		1									1							1	1

— *Continued.*

DISEASES. — *Continued.*

Order 5. — Urinary Organs.													Order 6 — Generative Organs.			Order 7. — Osseous and Locomotory System.						Order 8. — Integumentary System.						Total for Class III.			
Nephritis.	Ischuria.	Nephria (Bright's Disease).	Diabetes.	Calculus (Gravel, etc.).	Cystitis.	Prostate, Disease of.	Kidney Diseases.	Bladder, Diseases of.	Testicles, Disease of.	Total.		Ovarian Dropsy.	Disease of Uterus.	Total.	Bones, Diseases of.	Joint Diseases.	Vertebræ, Diseases of.	Total.		Phlegmon.	Ulcer.	Skin Diseases.	Total.		Male.	Female.	Sex not stated.	Total.
										M.	F.							M.	F.				M.	F.				
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	9	..	10
..	..	4	2	1	1	..	1	..	..	3	6	..	..	..	..	1	..	..	1	..	..	..	..	..	35	40	..	75
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
1	..	4	..	..	..	..	..	..	..	3	2	..	..	..	..	..	..	..	..	..	..	..	..	..	13	10	..	23
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	3
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	5	1	..	6
1	..	..	..	..	..	..	..	..	..	..	1	1	..	1	..	..	..	..	..	..	..	..	..	..	4	5	..	9
..	..	1	..	..	1	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	5	6	..	11
1	..	1	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	20	24	..	44
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	3
..	..	4	..	..	..	..	..	..	..	2	2	1	..	1	..	..	..	..	..	..	..	..	..	..	18	21	..	39
..	..	..	..	..	1	1	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	6	..	12

TABLE NO. XIII.

TOWNS IN STRAFFORD COUNTY.	CLASS IV.—DEVELOPMENTAL DISEASES.																			
	ORDER 1.—Of Children.									ORDER 2.—Of Women.			ORDERS 3 and 4.				Total for Class IV.		
	Still-born.	Debility, Infantile.	Debility, Premature Birth.	Cyanosis.	Spina Bifida.	Other Malformations.	Teething.	Innutrition.	Total.				Old Age.		Atrophy and Debility.				
									M.	F.	Childbirth.	Paramenia.	Total.	M.	F.	M.	F.	Male.	Female.	Total.
Barrington											1		1		1				2	2
Dover		4	1			1		9	10	5				7	5	2	2	19	12	31
Durham		1							1									1		1
Farmington	4	1		1					2	4	4	1	5	1	2			3	11	14
Lee														1				1		1
Madbury																	1		1	1
Middleton																				
Milton			1							1				1				1	1	2
New Durham														1	1			1	1	2
Rochester	3	1						1	1	4	2		2	5	7	2	3	8	16	24
Rollinsford				4			1		2	3				1		2		5	3	8
Somersworth	5	5							9	1				1	1			10	2	12
Strafford	1									1				1	2	1		2	3	5

— *Continued.*

CLASS V.—VIOLENT DEATHS.

Order 1.—Accident and Negligence.									Order 2.		Order 3.—Suicide.								Order 4.—Various.				Total for Class V.			Grand Total for all Classes.			
Fractures and Contusions.	Wounds, Unspecified.	Burns and Scalds.	Poison.	Drowning.	Suffocation.	Various.	Total.		Homicide.		Wounds, Unspecified.	Wounds, Pistol or Gunshot.	Wounds, Knife.	Poison.	Drowning.	Hanging.	Otherwise.	Total.	Violent, not Classed.		Cause not Reported.		Male.	Female.	Total.	Male.	Female.	Not stated.	Total.
							M.	F.	M.	F.							M.	F.	M.	F.	M.	F.							
..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	2	..	2	5	17	..	22
3	..	1	..	3	..	1	6	2	..	..	..	..	..	..	..	..	1	1	..	..	11	8	18	10	28	122	129	1	252
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	1	..	1	9	3	..	12
..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	1	1	..	..	..	1	2	1	3	25	30	..	55
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	4	..	6
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3	..	4
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	6	3		9
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	10	..	17
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	1	..	2	..	2	10	8	..	18
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	2	1	3	52	51	1	104
..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	3	..	3	14	13	..	27
..	..	..	..	1	..	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	2	..	3	1	4	57	81	1	139
..	..	..	1	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	1	..	1	..	2	1	3	12	14	..	26

TABLE NO. XIII.

CLASS I. —

ORDER 1. — Miasmatic.

TOWNS IN BELKNAP COUNTY.	Carbuncle.	Cholera, Asiatic.	Cholera, Sporadic.	Cholera Infantum.	Cholera Morbus.	Croup (Pseudo-membranous).	Diphtheria.	Diarrhea.	Dysentery.	Erysipelas.	Fever, Bilious.	Fever, Cerebro-spinal.	Fever, Intermittent.	Fever, Malarial.	Fever, Typhoid.	Fever, Typho-malarial.	Fever, Unspecified.	Fever, Yellow.	Influenza (Epidemic).	Measles.	Mumps.	Metria (Puerperal Fever).	Pertussis.
Alton				2											1					1			
Barnstead				1																			
Belmont							2																
Center Harbor																							
Gilford				4				1				1											
Gilmanton									2														
Laconia				11				2	2					1	5								3
Meredith				3																			
New Hampton				1							1												
Sanbornton																							
Tilton				1					1						1							1	

— *Continued.*

ZYMOTIC DISEASES.

						ORDER 2. — Enthetic.								ORDER 3. — Dietic.						ORDER 4. — Parasitic.					Total for Class I.			
Tonsilitis.	Scarlatina.	Small-pox.	Varicella.	Total.		Glanders.	Gonorrhœa.	Hydrophobia.	Malignant Pustule.	Septicæmia.	Syphilis.	Total.		Alcoholism.	Delirium Tremens.	Inanition.	Purpura and Scurvy.	Total.		Aphtha.	Worms.	Other Parasites.	Total.		Male.	Female.	Sex not stated.	Total.
				M.	F.							M.	F.					M.	F.				M.	F.				
..	..	..	..	3	1	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	4	1	..	5
..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	4	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	2	..	6
..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	..	16	8	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	16	8	..	24
..	..	..	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
..	..	..	..	2	..	..	..	..	1	..	..	..	1	1	..	..	..	1	..	..	..	..	..	..	3	1	..	4
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	1	..	..	2	3	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	3	3	..	6

TABLE NO. XIII.

TOWNS IN BELKNAP COUNTY.	CLASS II.—CONSTITUTIONAL DISEASES.																						
	ORDER 1.—Diathetic.												ORDER 2.—Tubercular.							Total for Class II.			
	Gout.	Dropsy.	Anæmia.	Cancer, Various.	Cancer of Breast.	Cancer of Stomach.	Cancer of Uterus.	Noma (Canker).	Mortification.	Rheumatism.	Total.		Scrofula.	Tabes Mesenterica.	Phthisis.	Hydrocephalus.	Tubercular Meningitis.	Total.		Male.	Female.	Total.
											M.	F.						M.	F.			
Alton				2					1		2	1			6			3	3	5	4	9
Barnstead		2									1	1								1	1	2
Belmont		1										1			2			1	1	1	2	3
Center Harbor										1		1									1	1
Gilford			1	2							2	1			8	1		4	5	6	6	12
Gilmanton				1								1			2			1	1	1	2	3
Laconia			1	1		1	1				2	2	2		18	1		8	13	10	15	25
Meredith				1			1		1	1	2	2			4			1	3	3	5	8
New Hampton			1		1					1	1	2								1	2	3
Sanbornton				1								1	1		1			1	1	1	2	3
Tilton									1		1				1				1	1	1	2

— *Continued.*

CLASS III. — LOCAL DISEASES.

Order 1. — Nervous System.												Order 2. — Circulatory System.					Order 3. — Respiratory System.								
Cephalitis.	Cerebritis.	Apoplexy.	Paralysis.	Insanity.	Chorea.	Epilepsy.	Tetanus.	Convulsions.	Brain Diseases.	Total.		Pericarditis.	Aneurism.	Heart Diseases.	Total.		Epistaxis.	Laryngitis.	Bronchitis, Acute.	Bronchitis, Chronic.	Pleurisy.	Pneumonia.	Asthma.	Lung Diseases.	Total.	
										M.	F.				M.	F.									M.	F.
1	..	1	3	..	..	..	..	..	..	3		2	..	..	2	1	1	..	..	..	..	8	..	..	5	3
..	..	2	3	..	..	..	..	..	..	3		2	..	..	4	2	2	..	..	1	..	2	..	..	1	2
..	..	1	3	..	..	..	..	..	..	..		4	..	..	5	2	3	..	..	..	..	2	..	..	1	1
..	..	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
2	..	2	2	..	..	1	..	1	2	2		8	..	..	3	1	2	..	..	1	..	2	..	..	2	1
..	..	2	1	..	..	..	..	..	..	1		2	..	..	..	..	..	..	..	..	..	5	..	..	4	1
3	..	4	6	..	..	1	..	2	1	9		8	..	..	6	2	4	..	..	..	..	10	1	..	6	5
..	..	4	..	..	..	..	..	..	1	1		4	..	..	3	2	1	..	..	2	..	2	..	..	3	1
..	..	1	..	..	..	..	..	..	..	1		..	..	..	4	3	1	..	..	..	..	2	..	..	2	..
1	..	2	2	..	..	..	..	1	2	4		4	..	..	5	3	2	..	..	..	1	1	..	..	1	1
1	..	1	2	..	..	1	..	2	1	5		3	1	..	2	1	2	..	..	..	..	2	..	..	1	1

TABLE NO. XIII.

CLASS III. — LOCAL

ORDER 4. — Digestive Organs.

TOWNS IN BELKNAP COUNTY.	Gastritis.	Enteritis.	Peritonitis.	Ascites.	Ulceration of Intestines.	Hernia.	Ileus.	Intussusception.	Stricture of Intestines.	Fistula.	Stomach Diseases.	Pancreas Diseases.	Hepatitis.	Jaundice.	Liver Diseases.	Spleen Diseases.	Bowel Diseases.	Total. M.	Total. F.
Alton		1									1							1	1
Barnstead		1	2																3
Belmont			1														1	2	
Center Harbor																			
Gilford		1	2															1	2
Gilmanton																			
Laconia	2	4											1					4	3
Meredith	1		1															1	1
New Hampton																			
Sanbornton																			
Tilton			1															1	

— *Continued.*

DISEASES. — *Continued.*

ORDER 5. — Urinary Organs.												ORDER 6 — Generative Organs.			ORDER 7. — Osseous and Locomotory System.						ORDER 8. — Integumentary System.						Total for Class III.			
Nephritis.	Ischuria.	Nephria (Bright's Disease).	Diabetes.	Calculus (Gravel, etc.).	Cystitis.	Prostate, Disease of.	Kidney Diseases.	Bladder, Diseases of.	Testicles, Disease of.	Total.		Ovarian Dropsy.	Disease of Uterus.	Total.	Bones, Diseases of.	Joint Diseases.	Vertebræ, Diseases of.	Total.		Phlegmon.	Ulcer.	Skin Diseases.	Total.		Male.	Female.	Sex not stated.	Total.
										M.	F.							M.	F.				M.	F.					
..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11	7	..	18
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	9	..	15
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	8	..	13
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
..	..	1	2	..	..	..	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	7	15	..	22
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	3	..	8
2	..	1	1	..	1	..	1	..	..	5	1	..	..	..	..	..	..	..	..	..	..	..	..	..	26	21	..	47
..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8	7	..	15
..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	1	..	8
..	..	1	..	..	..	..	..	..	..	1	..	1	..	1	..	..	..	..	..	..	..	..	..	..	9	8	..	17
..	..	..	1	..	1	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	10	6	..	16

TABLE NO. XIII.

TOWNS IN BELKNAP COUNTY.	CLASS IV. — DEVELOPMENTAL DISEASES.																			
	ORDER 1. — Of Children.										ORDER 2. — Of Women.			ORDERS 3 and 4.				Total for Class IV.		
	Still-born.	Debility, Infantile.	Debility, Premature Birth.	Cyanosis.	Spina Bifida.	Other Malformations.	Teething.	Inanition.	Total.		Childbirth.	Paramenia.	Total.	Old Age.		Atrophy and Debility.		Male.	Female.	Total.
									M.	F.				M.	F.	M.	F.			
Alton											1		1	1	1			1	2	3
Barnstead														3	1		1	3	2	5
Belmont		1						1	1	1				1				2	1	3
Center Harbor																	1		1	1
Gilford	3	1								4					2	2	1	2	7	9
Gilmanton														1	3			1	3	4
Laconia	2	2	4			1			5	4				1	4	1		7	8	15
Meredith	1								1					1	1			2	1	3
New Hampton	2								1	1					4			1	5	6
Sanbornton														1				1		1
Tilton	2							1	3					1	1			4	1	5

— *Continued.*

CLASS V. — VIOLENT DEATHS. Order 1. — Accident and Negligence. Fractures and Contusions.	Order 1. Wounds, Unspecified.	Order 1. Burns and Scalds.	Order 1. Poison.	Order 1. Drowning.	Order 1. Suffocation.	Order 1. Various.	Order 1. Total. M.	Order 1. Total. F.	Order 2. Homicide. M.	Order 2. Homicide. F.	Order 3. — Suicide. Wounds, Unspecified.	Order 3. Wounds, Pistol or Gunshot.	Order 3. Wounds, Knife.	Order 3. Poison.	Order 3. Drowning.	Order 3. Hanging.	Order 3. Otherwise.	Order 3. Total. M.	Order 3. Total. F.	Order 4. — Various. Violent, not Classed. M.	Order 4. Violent, not Classed. F.	Order 4. Cause not Reported. M.	Order 4. Cause not Reported. F.	Total for Class V. Male.	Total for Class V. Female.	Total for Class V. Total.	Grand Total for all Classes. Male.	Grand Total. Female.	Grand Total. Not stated.	Grand Total. Total.
..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	2	22	15	..	37
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	1	3	2	3	5	12	16	..	28
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	9	12	..	21
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	3
1	..	..	..	2	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	4	..	4	23	30	..	53
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	1	2	1	3	10	10	..	20
1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3	2	3	5	61	55	..	116
..	1	1	..	..	..	..	2	..	..	..	..	1	..	..	..	1	..	2	..	..	..	1	..	5	..	5	20	14	..	34
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	12	9	..	21
1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	1	3	13	11	..	24
1	..	..	..	..	..	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2	3	19	13	..	32

TABLE NO. XIII.

TOWNS IN CARROLL COUNTY.	CLASS I. — ORDER 1. — Miasmatic.																				
	Carbuncle.	Cholera, Asiatic.	Cholera, Sporadic.	Cholera Infantum.	Cholera Morbus.	Croup (Pseudo-membranous).	Diphtheria.	Diarrhea.	Dysentery.	Erysipelas.	Fever, Bilious.	Fever, Cerebro-spinal.	Fever, Intermittent.	Fever, Malarial.	Fever, Typhoid.	Fever, Typho-malarial.	Fever, Unspecified.	Fever, Yellow.	Influenza (Epidemic).	Measles.	Mumps.	Metria (Puerperal Fever).	Pertussis.
Albany																							
Bartlett				5		1			1														
Brookfield				1																			
Chatham																							
Conway				4											1								
Eaton																							
Effingham								2															
Freedom															1								
Hart's Location																							
Jackson								1															
Madison																							
Moultonborough												1											
Ossipee				1			1	1	2														
Sandwich															1								
Tamworth							1		1														
Tuftonborough				1					1						1								
Wakefield				1								1	1		2								
Wolfeborough									1														

— *Continued.*

ZYMOTIC DISEASES.

						Order 2. — Enthetic.								Order 3. — Dietic.						Order 4. — Parasitic.					Total for Class 1.			
Tonsilitis.	Scarlatina.	Small-pox.	Varicella.	Total.		Glanders.	Gonorrhœa.	Hydrophobia.	Malignant Pustule.	Septicæmia.	Syphilis.	Total.		Alcoholism.	Delirium Tremens.	Inanition.	Purpura and Scurvy.	Total.		Aphthæ.	Worms.	Other Parasites.	Total.		Male.	Female.	Sex not stated.	Total.
				M.	F.							M.	F.					M.	F.				M.	F.				
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	2	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	5	1	7
..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	2	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	3	..	5
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
..	..	..	..	2	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	3	..	5
..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2
..	..	..	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
..	..	..	..	4	1	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	5	1	..	6
..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1

TABLE NO. XIII.

TOWNS IN CARROLL COUNTY.	CLASS II. — CONSTITUTIONAL DISEASES.																					
	ORDER 1. — Diathetic.											ORDER 2. — Tubercular.						Total for Class II.		
	Gout.	Dropsy.	Anæmia.	Cancer, Various.	Cancer of Breast.	Cancer of Stomach.	Cancer of Uterus.	Noma (Canker).	Mortification.	Rheumatism.	Total.		Scrofula.	Tabes Mesenterica.	Phthisis.	Hydrocephalus.	Tubercular Meningitis.	Total.		Male.	Female.	Total.
											M.	F.						M.	F.			
Albany				1								1									1	1
Bartlett															1				1		1	1
Brookfield															2			2		2		2
Chatham															1				1		1	1
Conway				1				1				2			3	1		2	2	2	4	6
Eaton															1			1		1		1
Effingham		1									1				2			1	1	2	1	3
Freedom				1								1									1	1
Hart's Location																						
Jackson																	1		1		1	1
Madison																						
Moultonborough															2				2		2	2
Ossipee										1	1				1	1		1	1	2	1	3
Sandwich		2		2							1	3			3			2	1	3	4	7
Tamworth				1		2					2	1			3			2	1	4	2	6
Tuftonborough										1		1			5			2	3	2	4	6
Wakefield		1		1								2									2	2
Wolfeborough				1							1				5		1	2	4	3	4	7

— *Continued.*

CLASS III. — LOCAL DISEASES.

ORDER 1. — Nervous System.												ORDER 2. — Circulatory System.					ORDER 3. — Respiratory System.									
Cephalitis.	Cerebritis.	Apoplexy.	Paralysis.	Insanity.	Chorea.	Epilepsy.	Tetanus.	Convulsions.	Brain Diseases.	Total.		Pericarditis.	Aneurism.	Heart Diseases.	Total.		Epistaxis.	Laryngitis.	Bronchitis, Acute.	Bronchitis, Chronic.	Pleurisy.	Pneumonia.	Asthma.	Lung Diseases.	Total.	
										M.	F.				M.	F.									M.	F.
..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	1	..	..	..	..	..	..	..	1	..	..	..	1	1	..	..	..	1	..	..	4	1	..	2	4
..	..	..	..	..	..	1	..	..	..	1	..	..	..	1	..	1	..	..	2	..	..	2	1	..	3	2
..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	3	2	..	..	..	..	1	1	3	4	..	..	8	6	2	..	..	..	..	..	2	..	..	..	2
..	..	..	1	..	..	..	..	..	..	..	1	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	5	..	..	4	2
..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	1	..	..	..	..	..	..	..	1	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..
..	..	1	1	..	..	..	..	..	1	1	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	1	1	1	..	..	..	1	..	1	..	..	2	..	..	6	..	..	4	4
..	..	4	..	..	..	..	..	..	..	3	1	..	..	2	1	1	..	..	..	..	..	1	..	..	..	1
1	..	3	2	..	..	..	..	..	2	7	1	..	..	4	1	3	..	..	..	..	..	3	..	..	3	..
..	1	1	..	..	..	..	..	..	..	..	2	..	..	1	1	..	..	..	1	..	..	2	..	..	..	3
1	..	..	1	..	..	..	..	..	..	2	..	..	..	3	..	3	..	..	..	..	..	4	..	..	1	3
1	..	1	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	1	..	..	7	..	..	2	6
..	..	2	..	..	..	..	..	..	..	2	..	..	..	5	3	2	..	..	..	..	..	13	..	1	6	8

TABLE NO. XIII.

CLASS III. — LOCAL

ORDER 4. — Digestive Organs.

TOWNS IN CARROLL COUNTY.	Gastritis.	Enteritis.	Peritonitis.	Ascites.	Ulceration of Intestines.	Hernia.	Ileus.	Intussusception.	Stricture of Intestines.	Fistula.	Stomach Diseases.	Pancreas Diseases.	Hepatitis.	Jaundice.	Liver Diseases.	Spleen Diseases.	Bowel Diseases.	Total. M.	Total. F.
Albany	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Bartlett	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Brookfield	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Chatham	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Conway	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
Eaton	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Effingham	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	2	1
Freedom	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
Hart's Location	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Jackson	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Madison	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..
Moultonborough	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ossipee	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..
Sandwich	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	2	..
Tamworth	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Tuftonborough	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..
Wakefield	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..
Wolfeborough	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	2	..

— *Continued.*

DISEASES. — *Continued.*

Order 5. — Urinary Organs.												Order 6 — Generative Organs.		Order 7. — Osseous and Locomotory System.					Order 8. — Integumentary System.					Total for Class III.			
Nephritis.	Ischuria.	Nephria (Bright's Disease).	Diabetes.	Calculus (Gravel, etc.).	Cystitis.	Prostate, Disease of.	Kidney Diseases.	Bladder, Diseases of.	Testicles, Disease of.	Total. M.	Total. F.	Ovarian Dropsy.	Disease of Uterus.	Total.	Bones, Diseases of.	Joint Diseases.	Vertebræ, Diseases of.	Total. M.	Total. F.	Phlegmon.	Ulcer.	Skin Diseases.	Total. M.	Total. F.	Male.	Female.	Sex not stated.	Total.
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	4	..	8
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	3	..	7
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
..	..	1	1	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11	9	..	20
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	4	..	11
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	2	2	..	4
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	3
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	3	..	5
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	7	..	11
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	3	..	8
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	13	4	..	17
..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	7	..	8
..	..	2	..	..	..	..	..	..	..	1	1	..	..	..	..	..	1	1	..	..	..	..	..	..	6	7	..	13
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	6	..	11
..	..	..	..	..	..	..	1	1	..	2	..	..	..	..	..	..	..	..	..	1	..	..	..	1	15	11	..	26

TABLE NO. XIII.

TOWNS IN CARROLL COUNTY.	CLASS IV. — DEVELOPMENTAL DISEASES.																				
	ORDER 1. — Of Children.										ORDER 2. — Of Women.			ORDERS 3 and 4.				Total for Class IV.		
	Still-born.	Debility, Infantile.	Debility, Premature Birth.	Cyanosis.	Spina Bifida.	Other Malformations.	Teething.	Innutrition.	Total.		Childbirth.	Paramenia.	Total.	Old Age.		Atrophy and Debility.		Male.	Female.	Total.
									M.	F.				M.	F.	M.	F.			
Albany	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Bartlett	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Brookfield	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	1
Chatham	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	1
Conway	..	1	..	..	..	..	..	..	1	..	..	..	..	3	1	..	..	4	1	5
Eaton	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	1
Effingham	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1
Freedom	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1
Hart's Location	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Jackson	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1
Madison	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	1	1
Moultonborough	..	..	1	..	..	..	..	..	1	..	..	..	..	..	2	..	..	1	2	3
Ossipee	..	..	..	..	..	1	..	..	..	1	..	..	..	..	1	..	..	..	2	2
Sandwich	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	..	2	1	3
Tamworth	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1
Tuftonborough	1	1	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	1	1	2
Wakefield	..	..	1	..	..	..	..	..	1	..	1	..	1	..	1	..	..	1	2	3
Wolfeborough	2	..	..	..	..	..	..	..	2	..	..	..	..	1	3	..	..	3	3	6

— *Continued.*

CLASS V.—VIOLENT DEATHS.

Order 1.—Accident and Negligence.								Order 2.		Order 3.—Suicide.								Order 4.—Various.				Total for Class V.			Grand Total for all Classes.			
Fractures and Contusions.	Wounds, Unspecified.	Burns and Scalds.	Poison.	Drowning.	Suffocation.	Various.	Total.	Homicide.		Wounds, Unspecified.	Wounds, Pistol or Gunshot.	Wounds, Knife.	Poison.	Drowning.	Hanging.	Otherwise.	Total.	Violent, not Classed.		Cause not Reported.		Male.	Female.	Total.	Male.	Female.	Not stated.	Total.
								M.	F.								M. F.	M.	F.	M.	F.							
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	2	1	..	3
..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	6	10	1	17
..	..	..	..	2	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	9	4	..	13
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	3
..	..	..	..	..	..	3	3	..	..	..	..	..	..	..	..	..	..	..	..	..	2	3	2	5	22	19	..	41
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	4
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11	6	..	17
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	4	..	7
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	2	..	6
1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2	5	..	7
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	11	..	17
..	..	..	..	..	..	2	1	1	..	..	..	..	..	..	..	..	..	..	..	4	3	5	4	9	14	13	..	27
1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	18	11	..	29
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	11	..	17
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11	13	..	24
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11	11	..	22
..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	2	1	3	1	4	23	20	1	44

TABLE NO. XIII.

CLASS I. —

ORDER 1. — Miasmatic.

TOWNS IN MERRIMACK COUNTY.	Carbuncle.	Cholera, Asiatic.	Cholera, Sporadic.	Cholera Infantum.	Cholera Morbus.	Croup (Pseudo-membranous).	Diphtheria.	Diarrhœa.	Dysentery.	Erysipelas.	Fever, Bilious.	Fever, Cerebro-spinal.	Fever, Intermittent.	Fever, Malarial.	Fever, Typhoid.	Fever, Typho-malarial.	Fever, Unspecified.	Fever, Yellow.	Influenza (Epidemic).	Measles.	Mumps.	Metria (Puerperal Fever).	Pertussis.
Allenstown				1		2	1								1								
Andover				1		1	3					1		1									
Boscawen				2	2										1								
Bow				1																			
Bradford				1					1						1								
Canterbury				1											1								
Chichester						1																	
Concord				13		5	2	5	2	5				1	5							1	1
Danbury																							
Dunbarton	1																						
Epsom																							
Franklin				6						1					2								1
Henniker																							
Hill						1																	
Hooksett				2							1				2								
Hopkinton																							
Loudon																							
Newbury				1																			
New London																							
Northfield															1								
Pembroke						2	2								1							1	
Pittsfield				1				1	1						1								1
Salisbury																							
Sutton																							
Warner				1					1						1								1
Webster															2				1				
Wilmot																							

— *Continued.*

ZYMOTIC DISEASES.

						ORDER 2. — Enthetic.								ORDER 3. — Dietic.						ORDER 4. — Parasitic.					Total for Class I.			
Tonsilitis.	Scarlatina.	Small-pox.	Varicella.	Total.		Glanders.	Gonorrhœa.	Hydrophobia.	Malignant Pustule.	Septicæmia.	Syphilis.	Total.		Alcoholism.	Delirium Tremens.	Inanition.	Purpura and Scurvy.	Total.		Aphthæ.	Worms.	Other Parasites.	Total.		Male.	Female.	Sex not stated.	Total.
				M.	F.							M.	F.					M.	F.				M.	F.				
..	..	..	..	3	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	2	..	5
..	..	..	..	5	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	2	..	7
..	..	..	..	2	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	3	..	5
..	1	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2
..	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	3
..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
..	..	..	..	21	19	..	..	..	..	2	..	1	1	..	..	..	1	..	1	..	..	..	..	..	22	21	..	43
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
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..	..	..	..	6	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	4	..	10
..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
..	..	..	..	..	1	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2
..	..	..	..	..	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	..	5
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..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
..	..	..	..	2	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	4	..	6
..	..	..	..	3	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	2	..	5
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
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..	..	..	..	..	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	..	4
..	..	..	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...

TABLE NO. XIII.

TOWNS IN MERRIMACK COUNTY.	CLASS II.—CONSTITUTIONAL DISEASES.																					
	ORDER 1.—Diathetic.												ORDER 2.—Tubercular.							Total for Class II.		
	Gout.	Dropsy.	Anæmia.	Cancer, Various.	Cancer of Breast.	Cancer of Stomach.	Cancer of Uterus.	Noma (Canker).	Mortification.	Rheumatism.	Total. M.	Total. F.	Scrofula.	Tabes Mesenterica.	Phthisis.	Hydrocephalus.	Tubercular Meningitis.	Total. M.	Total. F.	Male.	Female.	Total.
Allenstown	..	..	..	..	..	1	..	..	..	..	..	1	..	..	1	..	..	..	1	..	2	2
Andover	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Boscawen	..	..	..	2	..	..	..	..	..	1	2	1	..	1	6	..	..	3	4	5	5	10
Bow	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	1	1	1	1	2
Bradford	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	1	1	1	1	2
Canterbury	..	..	1	1	..	..	..	..	..	..	..	2	..	..	2	..	1	2	1	2	3	5
Chichester	..	..	..	1	..	..	..	..	..	..	..	1	..	..	2	..	..	..	2	..	3	3
Concord	..	..	2	5	..	..	6	..	2	..	3	12	2	..	33	1	5	17	24	20	36	56
Danbury	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	1	1	1	1	2
Dunbarton	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Epsom	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	2	1	2	1	3
Franklin	..	..	1	3	..	..	..	..	..	..	1	3	1	..	4	..	..	1	4	2	7	9
Henniker	..	..	..	2	..	1	..	..	1	..	2	2	..	..	1	..	..	..	1	2	3	5
Hill	..	..	..	1	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	2	2
Hooksett	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	1	2	1	2	3
Hopkinton	..	2	..	..	..	..	1	..	..	1	2	2	..	..	5	..	..	3	2	5	4	9
Loudon	..	..	..	1	..	..	..	..	..	..	1	..	..	..	2	..	..	..	2	1	2	3
Newbury	..	..	1	..	..	..	..	..	..	..	1	..	..	..	1	..	..	1	..	2	..	2
New London	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1	1
Northfield	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	..	3	..	3	..	3
Pembroke	..	..	..	..	1	1	..	..	..	2	2	2	..	..	3	1	..	1	3	3	5	8
Pittsfield	..	2	..	2	..	..	..	..	..	..	..	4	1	..	4	..	..	3	2	3	6	9
Salisbury	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	..	..	2	2	2	2	4
Sutton	..	..	..	1	..	..	..	..	..	..	..	1	..	..	2	..	..	..	2	..	3	3
Warner	..	2	..	1	..	..	..	..	..	..	2	1	..	..	..	1	..	1	..	3	1	4
Webster	..	1	..	1	..	..	..	..	..	..	1	1	..	..	1	..	..	1	..	2	1	3
Wilmot	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	1	..	1

— *Continued.*

CLASS III. — LOCAL DISEASES.

ORDER 1. — Nervous System.												ORDER 2. — Circulatory System.					ORDER 3. — Respiratory System.								
Cephalitis.	Cerebritis.	Apoplexy.	Paralysis.	Insanity.	Chorea.	Epilepsy.	Tetanus.	Convulsions.	Brain Diseases.	Total. M.	Total. F.	Pericarditis.	Aneurism.	Heart Diseases.	Total. M.	Total. F.	Epistaxis.	Laryngitis.	Bronchitis, Acute.	Bronchitis, Chronic.	Pleurisy.	Pneumonia.	Asthma.	Lung Diseases.	Total. M.	Total. F.
..	..	..	1	..	..	..	..	..	..	1	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..
..	..	..	1	..	..	..	..	..	1	1	1	..	..	1	1	..	..	..	1	..	..	3	..	..	2	2
..	..	4	..	4	..	2	..	..	..	2	8	2	..	2	4	..	..	..	..	..	1	8	..	..	4	5
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	1	..	..	..	..	..	1	..	2	..	..	..	1	1	..	..	..	..	..	..	1	..	..	1	..
..	..	1	1	..	..	..	..	..	..	..	2	..	..	1	1	..	..	..	1	..	..	..	..	..	1	..
..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3	3	19	7	18	..	..	..	1	20	39	32	1	..	35	18	18	..	..	3	..	1	27	1	1	15	18
1	..	..	..	..	..	..	..	..	..	..	1	..	..	2	1	1	..	..	..	..	..	3	..	..	2	1
..	..	..	..	..	..	..	..	..	1	..	1	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	..	..	..	..	..	3	..	..	1	2
1	..	3	..	1	..	..	..	..	1	4	2	..	..	3	2	1	..	..	1	..	1	10	..	..	7	5
1	..	1	1	..	..	..	..	..	1	4	..	..	..	6	4	2	..	..	..	..	..	2	..	..	2	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
1	..	..	3	..	..	..	..	..	1	2	3	..	..	2	1	1	..	..	..	..	..	4	..	..	1	3
1	..	2	1	..	..	1	..	..	2	4	3	..	..	3	2	1	..	..	1	1	..	4	..	..	2	4
..	2	5	..	..	..	..	..	..	..	1	6	..	..	2	1	1	..	..	..	..	..	1	..	..	1	..
1	..	1	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
..	..	..	1	..	..	..	..	..	1	1	1	..	..	..	..	..	..	..	..	..	..	2	..	..	1	1
..	..	1	..	..	..	1	..	1	..	1	2	1	..	..	..	1	..	..	..	..	..	3	..	..	..	3
..	..	1	..	..	..	..	..	2	..	1	2	..	..	1	..	1	..	..	..	..	..	1	..	..	..	1
4	..	1	2	..	..	..	..	..	..	3	4	..	..	6	3	3	..	..	..	..	..	3	..	..	2	1
..	..	1	1	..	..	..	..	..	..	..	2	..	..	1	1	..	..	..	..	..	..	1	..	..	..	1
1	..	1	..	..	..	..	..	..	..	1	1	..	..	3	..	3	..	..	..	..	..	..	..	..	..	..
..	..	3	2	..	..	..	..	..	..	3	2	..	..	2	2	..	..	..	..	..	..	2	..	..	1	1
..	..	1	1	..	..	..	..	..	..	..	2	..	..	1	..	1	..	..	1	..	..	2	..	..	2	1
..	..	..	..	1	..	..	..	..	..	..	1	..	..	6	2	4	..	..	..	..	..	4	..	..	2	2

TABLE NO. XIII.

TOWNS IN MERRIMACK COUNTY.	CLASS III.—LOCAL																	
	ORDER 4.—Digestive Organs.																	
	Gastritis.	Enteritis.	Peritonitis.	Ascites.	Ulceration of Intestines.	Hernia.	Ileus.	Intussusception.	Stricture of Intestines.	Fistula.	Stomach Diseases.	Pancreas Diseases.	Hepatitis.	Jaundice.	Liver Diseases.	Spleen Diseases.	Bowel Diseases.	Total. M.	Total. F.
Allenstown	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Andover	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Boscawen	..	3	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	3	1
Bow	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Bradford	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	2	..
Canterbury	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Chichester	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Concord	..	2	2	..	1	1	..	..	..	..	3	..	..	1	4	..	1	8	7
Danbury	1	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	1	2	2
Dunbarton	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Epsom	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Franklin	..	1	1	..	..	..	..	..	..	..	1	..	..	..	1	..	..	3	1
Henniker	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
Hill	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	1	2	1
Hooksett	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hopkinton	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	1
Loudon	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	2	..
Newbury	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
New London	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Northfield	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	1
Pembroke	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Pittsfield	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	2	1
Salisbury	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Sutton	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
Warner	..	..	..	..	..	1	1	..	..	..	..	..	..	..	1	..	..	2	1
Webster	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Wilmot	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	1	1

— *Continued.*

DISEASES.—*Continued.*

Order 5.—Urinary Organs.												Order 6—Generative Organs.			Order 7.—Osseous and Locomotory System.					Order 8.—Integumentary System.					Total for Class III.		
Nephritis.	Ischuria.	Nephria (Bright's Disease).	Diabetes.	Calculus (Gravel, etc.).	Cystitis.	Prostate, Disease of.	Kidney Diseases.	Bladder, Diseases of.	Testicles, Disease of.	Total. M.	Total. F.	Ovarian Dropsy.	Disease of Uterus.	Total.	Bones, Diseases of.	Joint Diseases.	Vertebræ, Diseases of.	Total. M.	Total. F.	Phlegmon.	Ulcer.	Skin Diseases.	Total. M.	Total. F.	Male.	Female.	Sex not stated.	Total.
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	1	..	..	1	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	4	..	10
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	13	14	..	27
..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	1	..	..	..	..	..	7	1	..	8
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	4
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
4	..	6	2	..	3	..	1	..	..	12	4	1	..	1	..	..	..	..	..	..	..	..	..	..	92	80	..	172
1	..	1	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	6	6	..	12
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	2	..	5
1	..	1	1	..	..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	19	9	..	28
..	..	2	..	..	..	1	..	..	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	12	4	..	16
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	4
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	7	..	11
..	..	1	..	..	..	..	1	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	10	10	..	20
..	..	1	..	..	1	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	7	..	14
..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	..	4
..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	2	3	..	5
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	7	..	9
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	4	..	5
..	..	5	..	..	..	..	..	1	..	3	3	..	..	..	..	..	..	..	..	..	..	..	..	..	13	12	..	25
..	..	1	1	..	..	..	1	..	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	3	4	..	7
..	..	2	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	2	6	..	8
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8	4	..	12
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	4	..	6
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	8	..	13

TABLE NO. XIII.

TOWNS IN MERRIMACK COUNTY.	CLASS IV. — DEVELOPMENTAL DISEASES.																			
	ORDER 1. — Of Children.											ORDER 2. — Of Women.		ORDERS 3 and 4.				Total for Class IV.		
	Still-born.	Debility, Infantile.	Debility, Premature Birth.	Cyanosis.	Spina Bifida.	Other Malformations.	Teething.	Innutrition.	Total.			Childbirth.	Paramenia.	Total.	Old Age.		Atrophy and Debility.		Male.	Female.	Total.
									M.	F.					M.	F.	M.	F.			
Allenstown			1						1							1			1	1	2
Andover															1				1		1
Boscawen			1			1			1	1						1		1	1	3	4
Bow			1					1	2						1		1		4		4
Bradford		1								1					1				1	1	2
Canterbury	1								1						1			2	2	2	4
Chichester			1							1										1	1
Concord	17	1	3	1		2		4	14	14	1		1	2	9	1		6	17	20	37
Danbury															2	1			2	1	3
Dunbarton			1			1			2						1	2			3	2	5
Epsom																	1	2	1	2	3
Franklin	3			2					1	4									1	4	5
Henniker			1						1							1			1	1	2
Hill	1								1						1	1			2	1	3
Hooksett	1	2						3	2	4					2	1			4	5	9
Hopkinton	1								1							4			1	4	5
Loudon	5								5									2	5	2	7
Newbury																					
New London																1				1	1
Northfield															2				2		2
Pembroke		1	1						1	1						1			1	2	3
Pittsfield	1	1	2					1	3	2						4			3	6	9
Salisbury			1						1						1	2			2	2	4
Sutton	2								2		1		1	1	1	2			3	3	6
Warner															1	1	1		2	1	3
Webster																2				2	2
Wilmot																					

— *Continued.*

CLASS V. — VIOLENT DEATHS.																											Grand Total for all Classes.			
ORDER 1. — Accident and Negligence.									ORDER 2.		ORDER 3. — Suicide.									ORDER 4. — Various.				Total for Class V.						
Fractures and Contusions.	Wounds, Unspecified.	Burns and Scalds.	Poison.	Drowning.	Suffocation.	Various.	Total.		Homicide.		Wounds, Unspecified.	Wounds, Pistol or Gunshot.	Wounds, Knife.	Poison.	Drowning.	Hanging.	Otherwise.	Total.		Violent, not Classed.		Cause not Reported.		Male.	Female.	Total.	Male.	Female.	Not stated.	Total.
							M.	F.	M.	F.								M.	F.	M.	F.	M.	F.							
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	6	..	11
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	..	2	14	6	..	10
..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	1	..	..	1	..	1	2	3	22	27	..	49
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	3	2	9
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	10	5	..	15
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	1	2	8	9	..	17
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	5	..	7
6	2	..	..	1	..	5	10	4	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3	11	7	18	162	174	..	336
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	9	8	..	17
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	4	1	8
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	5	..	11
..	..	..	..	..	..	1	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1	2	3	29	26	..	55
1	..	..	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	18	8	..	26
1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	5	7	..	12
..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	2	..	2	10	19	1	30
..	..	1	..	..	..	2	3	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	4	..	4	20	18	..	38
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	1	2	12	12	2	26
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	4	4	..	8
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	5	..	7
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	..	2	10	7	..	17
..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	2	2	4	9	17	..	26
..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	6	2	4	3	7	24	29	2	55
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1	7	9	..	16
..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	6	12	..	18
..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	2	3	14	12	..	26
..	..	..	..	1	..	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2	7	9	..	16
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1	6	9	..	15

TABLE NO. XIII.

CLASS I.—

ORDER 1.—Miasmatic.

TOWNS IN HILLSBOROUGH COUNTY.	Carbuncle.	Cholera, Asiatic.	Cholera, Sporadic.	Cholera Infantum.	Cholera Morbus.	Croup (Pseudo-membranous).	Diphtheria.	Diarrhœa.	Dysentery.	Erysipelas.	Fever, Bilious.	Fever, Cerebro-spinal.	Fever, Intermittent.	Fever, Malarial.	Fever, Typhoid.	Fever, Typho-malarial.	Fever, Unspecified.	Fever, Yellow.	Influenza (Epidemic).	Measles.	Mumps.	Metria (Puerperal Fever).	Pertussis.
Amherst																							
Antrim																							
Bedford				1			1								1								
Bennington				1																			
Brookline																							1
Deering																							
Francestown					1		2								2								
Goffstown						1	1								1								
Greenfield																							
Greenville				6		1									5								1
Hancock																							
Hillsborough				1			1								1								
Hollis						1		1	2														
Hudson				1			1		1														
Litchfield																							
Lyndeborough				2					1														
Manchester				86	1	25	24	7	7	1		2		3	18		1			5		2	5
Mason								1															
Merrimack						1																	
Milford				2		1	1	1							3					1			1
Mont Vernon															1								
Nashua	1			43	2	4	18	7	10	1					4							1	5
New Boston						1				1													
New Ipswich				1	1																		
Pelham				1																			
Peterborough				1		1	6																
Sharon																							
Temple							1																
Weare								1														1	
Wilton				1		1											2						2
Windsor																							

— *Continued.*

ZYMOTIC DISEASES.

						ORDER 2.—Enthetic.								ORDER 3.—Dietic.						ORDER 4.—Parasitic.						Total for Class I.			
Tonsilitis.	Scarlatina.	Small-pox.	Varicella.	Total.		Glanders.	Gonorrhœa.	Hydrophobia.	Malignant Pustule.	Septicæmia.	Syphilis.	Total.		Alcoholism.	Delirium Tremens.	Inanition.	Purpura and Scurvy.	Total.		Aphthæ.	Worms.	Other Parasites.	Total.		Male.	Female.	Sex not stated.	Total.
				M.	F.							M.	F.					M.	F.				M.	F.					
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	2	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	3	..	5
..	..	..	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
..	..	..	..	8	5	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	9	5	..	14
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	3
..	..	..	..	1	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3	..	4
..	1	..	..	..	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	..	4
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	3
..	5	..	..	98	94	..	..	..	..	3	..	1	2	1	..	..	1	1	1	..	..	..	..	..	98	97	2	197
..	..	..	..	1	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2
..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
..	1	..	..	6	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	5	..	11
..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
..	..	..	..	53	43	..	..	1	..	1	1	1	2	..	..	1	..	1	..	..	..	..	..	..	55	45	..	100
..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
..	..	..	..	4	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	4	..	8
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	..	5	1	..	..	..	..	1	2	3	..	..	..	..	..	..	..	..	..	..	..	..	8	1	..	9
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

TABLE NO. XIII.

TOWNS IN HILLSBOROUGH COUNTY.	CLASS II.—CONSTITUTIONAL DISEASES.																						
	ORDER 1.—Diathetic.												ORDER 2.—Tubercular.							Total for Class II.		
	Gout.	Dropsy.	Anæmia.	Cancer, Various.	Cancer of Breast.	Cancer of Stomach.	Cancer of Uterus.	Noma (Canker).	Mortification.	Rheumatism.	Total. M.	Total. F.	Scrofula.	Tabes Mesenterica.	Phthisis.	Hydrocephalus.	Tubercular Meningitis.	Total. M.	Total. F.	Male.	Female.	Total.
Amherst				1								1			2			1	1	1	2	3
Antrim															2			1	1	1	1	2
Bedford				2								2			1			1		1	2	3
Bennington				1		1					1	1			1			1		2	1	3
Brookline				1	1				1			3			1				1		4	4
Deering		1										1			2			1	1	1	2	3
Francestown						1						1			1				1		2	2
Goffstown															5			1	4	1	4	5
Greenfield				1							1			1	3			2	2	3	2	5
Greenville										1	1		2			1		2	1	3	1	4
Hancock						1			1		2				1		1		2	2	2	4
Hillsborough				1								1			1			1		1	1	2
Hollis				1								1									1	1
Hudson				1								1			2			1	1	1	2	3
Litchfield															1				1		1	1
Lyndeborough															2			1	1	1	1	2
Manchester		3	2	17	1	3	3	1	2	8	12	28	1	1	78		4	33	51	45	79	124
Mason		1									1				1				1	1	1	2
Merrimack															1				1		1	1
Milford				1						1	1	1			4			3	1	4	2	6
Mont Vernon																						
Nashua			1	3		1	2		1	4	4	8	1		30	2	1	15	19	19	27	46
New Boston															3			1	2	1	2	3
New Ipswich			1	1					1		1	2			4			1	3	2	5	7
Pelham				1								1			4			3	1	3	2	5
Peterborough				1	1							2			8		1	4	5	4	7	11
Sharon																						
Temple																						
Weare		1		2							1	2			2				2	1	4	5
Wilton		1		1		1			1	1	3	2			8			5	3	8	5	13
Windsor																						

— *Continued.*

CLASS III. — LOCAL DISEASES.

ORDER 1. — Nervous System.												ORDER 2. — Circulatory System.					ORDER 3. — Respiratory System.									
Cephalitis.	Cerebritis.	Apoplexy.	Paralysis.	Insanity.	Chorea.	Epilepsy.	Tetanus.	Convulsions.	Brain Diseases.	Total.		Pericarditis.	Aneurism.	Heart Diseases.	Total.		Epistaxis.	Laryngitis.	Bronchitis, Acute.	Bronchitis, Chronic.	Pleurisy.	Pneumonia.	Asthma.	Lung Diseases.	Total.	
										M.	F.				M.	F.									M.	F.
..	..	4	3	..	..	..	..	..	1	4	4	..	..	2	2	..	..	..	..	..	..	3	..	..	1	2
..	..	2	4	..	..	..	..	..	..	3	3	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..
..	..	1	..	..	..	..	..	..	..	1	..	..	..	3	1	2	..	..	..	..	..	2	..	..	1	1
1	..	1	..	..	..	..	..	..	..	1	1	..	..	3	2	1	..	..	..	..	..	..	..	..	..	..
..	..	..	2	..	..	..	..	1	..	..	3	..	..	2	2	..	..	..	2	..	..	..	..	..	..	2
..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	4	..	..	2	2
..	..	..	1	..	..	1	..	1	..	1	2	..	..	..	..	..	..	..	..	..	..	3	..	..	2	1
..	..	1	..	..	..	..	..	..	..	..	1	..	..	4	3	1	..	..	2	..	..	..	..	..	1	1
..	..	4	..	..	..	..	..	..	..	4	..	..	..	2	1	1	..	..	..	..	..	1	..	..	..	1
..	..	1	2	..	..	..	..	..	..	1	2	..	..	2	2	..	..	..	..	..	..	..	..	..	..	..
..	..	2	1	..	..	..	..	1	..	2	2	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..
1	..	1	..	..	..	..	..	..	1	2	1	..	..	4	2	2	..	..	..	..	..	4	..	..	4	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	1	..	..	..	..	..	..	..	..	..	..
..	..	2	..	..	..	..	..	..	..	1	1	..	..	3	2	1	..	..	1	..	..	1	..	..	1	1
..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..
24	2	18	7	1	..	2	..	11	10	43	32	1	..	47	19	29	..	..	29	6	8	53	..	..	43	53
1	..	..	1	..	..	..	..	..	..	2	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..
1	..	1	..	..	..	..	..	..	1	1	2	..	..	4	2	2	..	..	..	..	..	2	..	..	..	2
..	..	2	2	..	..	..	..	..	..	..	4	..	..	3	2	1	..	1	3	..	..	7	..	..	3	8
..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7	1	12	2	..	..	..	..	4	2	14	14	2	..	21	13	10	..	..	14	1	..	27	..	2	17	27
..	..	3	..	..	..	..	..	1	..	4	..	1	..	1	1	1	..	..	1	..	..	2	..	..	1	2
..	1	..	1	..	..	..	..	..	..	1	1	..	..	1	1	..	..	..	..	..	..	2	..	..	1	1
..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..
..	..	1	..	..	..	..	..	1	1	..	3	..	..	4	3	1	..	..	1	..	..	8	..	..	5	4
..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	3	..	..	..	..	..	..	..	3	..	..	7	3	4	..	..	..	..	..	1	1	..	1	1
..	..	3	1	..	..	..	..	1	3	7	1	..	..	5	2	3	..	..	1	..	..	8	..	..	3	6
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

TABLE NO. XIII.

CLASS III. — LOCAL

ORDER 4. — Digestive Organs.

TOWNS IN HILLSBOROUGH COUNTY.	Gastritis.	Enteritis.	Peritonitis.	Ascites.	Ulceration of Intestines.	Hernia.	Ileus.	Intussusception.	Stricture of Intestines.	Fistula.	Stomach Diseases.	Pancreas Diseases.	Hepatitis.	Jaundice.	Liver Diseases.	Spleen Diseases.	Bowel Diseases.	Total. M.	Total. F.
Amherst	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Antrim	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Bedford	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Bennington	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
Brookline	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1
Deering	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2	..
Francestown	..	..	1	..	..	..	..	..	..	..	1	..	1	..	1	..	..	2	2
Goffstown	..	..	..	1	..	..	1	..	..	..	..	..	1	..	..	..	..	..	3
Greenfield	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Greenville	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	1
Hancock	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
Hillsborough	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hollis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hudson	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
Litchfield	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Lyndeborough	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Manchester	7	6	4	..	2	1	1	1	..	..	3	..	2	1	5	..	2	13	22
Mason	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Merrimack	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Milford	..	1	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	3
Mont Vernon	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Nashua	5	1	1	..	..	..	..	..	..	..	1	..	..	1	2	..	..	7	4
New Boston	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
New Ipswich	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	2
Pelham	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Peterborough	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Sharon	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Temple	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Weare	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	2
Wilton	..	2	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	3	1
Windsor	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..

— *Continued.*

DISEASES. — *Continued.*

Order 5. — Urinary Organs.													Order 6 — Generative Organs.			Order 7. — Osseous and Locomotory System.					Order 8. — Integumentary System.					Total for Class III.			
Nephritis.	Ischuria.	Nephria (Bright's Disease).	Diabetes.	Calculus (Gravel, etc.).	Cystitis.	Prostate, Disease of.	Kidney Diseases.	Bladder, Diseases of.	Testicles, Disease of.	Total. M.	Total. F.	Ovarian Dropsy.	Disease of Uterus.	Total.	Bones, Diseases of.	Joint Diseases.	Vertebræ, Diseases of.	Total. M.	Total. F.	Phlegmon.	Ulcer.	Skin Diseases.	Total. M.	Total. F.	Male.	Female.	Sex not stated.	Total.
..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8	6	..	14
..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	3	..	8
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	3	..	6
..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	2	..	7
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	6	..	8
..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	5	3	..	8
..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	5	6	..	11
..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	6	..	11
..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	5	3	..	8
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	3	..	7
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	2	..	6
..	..	..	..	..	1	..	..	..	..	1	..	..	1	1	..	..	..	..	..	..	..	..	..	..	9	4	..	13
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	3	..	8
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
1	..	11	2	2	1	..	1	..	..	10	8	..	2	2	1	1	..	2	..	..	..	..	..	..	130	146	..	276
..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	* 1	..	5
..	..	1	..	..	1	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	4	7	..	11
1	..	..	..	..	1	..	1	..	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	7	17	..	24
..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	8	..	..	1	..	4	..	..	5	8	..	..	..	..	..	..	..	..	..	..	..	..	..	56	63	..	119
1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	* 7	3	..	10
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	4	..	7
..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	1	3	..	4
..	..	1	..	..	1	..	1	..	..	2	1	..	..	..	1	..	..	..	1	..	..	..	..	..	10	10	..	20
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...	1	..	1
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..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	10	..	15
..	..	1	1	..	..	..	1	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	16	13	..	29
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	...	..	1

* Includes one death from Otitis, which is not embraced in any of the orders given.

TABLE NO. XIII.

TOWNS IN HILLSBOROUGH COUNTY.	CLASS IV. — DEVELOPMENTAL DISEASES.																			
	ORDER 1. — Of Children.										ORDER 2. — Of Women.			ORDERS 3 and 4.				Total for Class IV.		
	Still-born.	Debility, Infantile.	Debility, Premature Birth.	Cyanosis.	Spina Bifida.	Other Malformations.	Teething.	Innutrition.	Total.		Childbirth.	Paramenia.	Total.	Old Age.		Atrophy and Debility.		Male.	Female.	Total.
									M.	F.				M.	F.	M.	F.			
Amherst														2				2		2
Antrim														1				1		1
Bedford															2				2	2
Bennington														1	1			1	1	2
Brookline								2	2									2		2
Deering																				
Francestown														2	2			2	2	4
Goffstown								3	1	2				4	4			5	6	11
Greenfield															1				1	1
Greenville	2							1	2	1								2	1	3
Hancock														1				1		1
Hillsborough		1							1									1		1
Hollis		1							1					1				2		2
Hudson		1							1					1	1			2	1	3
Litchfield														1				1		1
Lyndeborough	3								2	1				1	1			3	2	5
Manchester	60	22	12			1	13	6	65	49	2		2	9	9	5	10	79	70	149
Mason	2								2							1		3		3
Merrimack	1									1					3				4	4
Milford	2					1			2	1				4				6	1	7
Mont Vernon																				
Nashua	22	14	7		1			4	29	19	2		2	5	2	1	1	35	24	59
New Boston			1							1				1			2	1	3	4
New Ipswich	2					1			1	2								1	2	3
Pelham																				
Peterborough	2								2					3				5		5
Sharon											1		1						1	1
Temple															1				1	1
Weare											1		1	5	2			5	3	8
Wilton	2							1	1	2				3	1	1		5	3	8
Windsor																				

— *Continued.*

CLASS V.—VIOLENT DEATHS.

ORDER 1.—Accident and Negligence.									ORDER 2.		ORDER 3.—Suicide.									ORDER 4.—Various.				Total for Class V.			Grand Total for all Classes.			
Fractures and Contusions.	Wounds, Unspecified.	Burns and Scalds.	Poison.	Drowning.	Suffocation.	Various.	Total.		Homicide.		Wounds, Unspecified.	Wounds, Pistol or Gunshot.	Wounds, Knife.	Poison.	Drowning.	Hanging.	Otherwise.	Total.		Violent, not Classed.		Cause not Reported.		Male.	Female.	Total.	Male.	Female.	Not stated.	Total.
							M.	F.	M.	F.								M.	F.	M.	F.	M.	F.							
..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	2	..	2	13	8	..	21
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	4	..	11
..	..	2	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2	7	9	..	16
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8	5	..	13
..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	6	10	..	16
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	5	..	11
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	9	13	..	22
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	13	17	1	31
..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	9	7	..	16
..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1	2	19	11	..	30
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	4	..	11
1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	13	7	..	20
..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	2	2	4	7	..	11
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8	10	..	18
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	8	6	..	14
3	..	2	1	4	2	11	18	5	..	..	..	..	..	..	..	1	..	3	4	..	..	33	32	55	37	92	382	429	27	838
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	10	2	..	12
..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	2	1	3	7	13	..	20
1	..	..	..	..	..	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2	24	26	..	50
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
2	..	1	1	..	..	3	6	1	..	..	..	..	..	..	..	..	1	1	..	..	..	9	6	16	7	23	181	166	..	347
..	..	..	..	2	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	12	9	..	21
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	1	2	8	13	..	21
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	5	6	..	11
..	..	..	..	1	..	2	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	4	2	6	27	23	..	50
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	1	2	..	3
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	12	18	..	30
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	..	..	3	3	3	5	8	40	27	..	67
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1

TABLE NO. XIII.

TOWNS IN CHESHIRE COUNTY.	CLASS I. — ORDER 1. — Miasmatic.																				
	Carbuncle.	Cholera, Asiatic.	Cholera, Sporadic.	Cholera Infantum.	Cholera Morbus.	Croup (Pseudo-membranous).	Diphtheria.	Diarrhœa.	Dysentery.	Erysipelas.	Fever, Bilious.	Fever, Cerebro-spinal.	Fever, Intermittent.	Fever, Malarial.	Fever, Typhoid.	Fever, Typho-malarial.	Fever, Unspecified.	Fever, Yellow.	Influenza (Epidemic).	Measles.	Mumps.	Metria (Puerperal Fever).	Pertussis.
Alstead				3																			
Chesterfield							2										1						
Dublin											1												
Fitzwilliam									1														
Gilsum																							
Harrisville								1															
Hinsdale				2	1	1	1					1		1	3								
Jaffrey				2																			
Keene				8		1	24		2						1								2
Marlborough				2																			
Marlow				1			2															1	
Nelson																							
Richmond								1															
Rindge				1		1	1								1					1			
Roxbury																							2
Stoddard																							
Sullivan							1	1															1
Surry																							
Swanzey				3					2						1								
Troy				1		1																	
Walpole						1		1												1			
Westmoreland							4																
Winchester				2													2					1	

— *Continued.*

ZYMOTIC DISEASES.

						ORDER 2. — Enthetic.								ORDER 3. — Dietic.					ORDER 4. — Parasitic.					Total for Class I.			
Tonsillitis.	Scarlatina.	Small-pox.	Varicella.	Total.		Glanders.	Gonorrhœa.	Hydrophobia.	Malignant Pustule.	Septicæmia.	Syphilis.	Total.		Alcoholism.	Delirium Tremens.	Inanition.	Purpura and Scurvy.	Total.	Aphthæ.	Worms.	Other Parasites.	Total.		Male.	Female.	Sex not stated.	Total.
				M.	F.							M.	F.					M. F.				M.	F.				
..	..	..	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
..	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	3
..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
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..	..	..	..	6	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	4	..	10
..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	..	24	14	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	25	14	..	39
..	..	..	..	1	1	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
..	..	..	..	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	4
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
..	..	..	..	1	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	4	..	5
..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	3
..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
..	..	..	..	4	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	2	..	6
..	2	..	..	1	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3	..	4
..	..	..	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
..	..	..	..	..	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	..	4
..	..	..	..	3	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	2	..	5

TABLE NO. XIII.

TOWNS IN CHESHIRE COUNTY.	CLASS II.—CONSTITUTIONAL DISEASES.																					
	ORDER 1.—Diathetic.												ORDER 2.—Tubercular.							Total for Class II.		
	Gout.	Dropsy.	Anæmia.	Cancer, Various.	Cancer of Breast.	Cancer of Stomach.	Cancer of Uterus.	Noma (Canker).	Mortification.	Rheumatism.	Total. M.	Total. F.	Scrofula.	Tabes Mesenterica.	Phthisis.	Hydrocephalus.	Tubercular Meningitis.	Total. M.	Total. F.	Male.	Female.	Total.
Alstead			1		1						1	1	1		1			1	1	2	2	4
Chesterfield				2								2			2				2		4	4
Dublin																						
Fitzwilliam				1							1				2			1	1	2	1	3
Gilsum															2			1	1	1	1	2
Harrisville															2			1	1	1	1	2
Hinsdale										1		1			7			1	6	1	7	8
Jaffrey			1							1	1	1			4			3	1	4	2	6
Keene		1	2	4					1	1	5	4			13			7	6	12	10	22
Marlborough															2			1	1	1	1	2
Marlow			1									1			2				2		3	3
Nelson													1		1			1	1	1	1	2
Richmond									1			1									1	1
Rindge															1			1		1		1
Roxbury																						
Stoddard				1								1			1			1		1	1	2
Sullivan													1						1		1	1
Surry																						
Swanzey				3							2	1			4			1	3	3	4	7
Troy															2				2		2	2
Walpole										1		1			1			1		1	1	2
Westmoreland					1						1				1	1		2		3		3
Winchester			1		1						2				5	1		1	5	3	5	8

— *Continued.*

CLASS III. — LOCAL DISEASES.

ORDER 1. — Nervous System.												ORDER 2. — Circulatory System.					ORDER 3. — Respiratory System.								
Cephalitis.	Cerebritis.	Apoplexy.	Paralysis.	Insanity.	Chorea.	Epilepsy.	Tetanus.	Convulsions.	Brain Diseases.	Total.		Pericarditis.	Aneurism.	Heart Diseases.	Total.		Epistaxis.	Laryngitis.	Bronchitis, Acute.	Bronchitis, Chronic.	Pleurisy.	Pneumonia.	Asthma.	Lung Diseases.	Total.	
										M.	F.				M.	F.									M.	F.
....	....	2	....	....	....	1	....	....	....	2	1	....	....	1	....	1	....	....	....	....	....	1	....	....	....	1
....	....	1	1	....	....	....	....	....	....	2	....	....	....	3	1	2	....	....	....	....	....	3	....	....	3	..
....	....	2	....	....	....	....	....	....	....	1	1	....	....	3	....	3	....	....	....	....	....	1	....	....	....	1
....	....	2	2	....	....	....	....	....	....	2	2	....	....	1	....	1	....	....	1	....	....	3	....	....	2	2
1	....	....	2	....	....	....	....	....	....	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	..
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..	1	1	....	....	....	....	....	....	1	1	2	....	....	3	1	2	....	....	....	....	....	1	....	....	....	1
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4	..	3	7	....	....	....	..	2	1	5	12	....	....	12	7	5	....	....	....	....	..	8	....	....	4	4
1	..	....	....	....	....	1	....	..	2	1	3	....	....	....	....	....	....	....	....	....	....	4	....	....	3	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	3	3	....	....	....	....	....	....	1	....	....	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	....	1	1
....	....	....	1	....	....	....	....	....	....	1	....	....	....	3	3	....	....	....	....	....	....	....	....	....	....	..
1	....	....	1	1	....	....	....	....	....	3	....	....	....	....	....	....	....	....	1	....	....	4	....	....	3	2
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1	....	....	....	....	....	....	....	....	1	..	2	....	....	2	....	2	....	....	....	....	....	1	....	....	....	1
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1	....	....	2	....	....	1	....	....	....	1	3	....	....	4	3	1	....	....	....	....	....	3	..	1	3	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1	....	....	1	....	....	1	....	....	1	1
1	....	....	....	....	....	....	....	....	1	1	2	1	....	3	3	....	....	....	2	....	....	7	....	....	5	4
....	....	....	....	....	....	....	....	....	1	..	1	....	....	6	3	3	....	....	1	....	....	7	....	....	2	6
1	..	2	1	....	....	....	....	....	..	1	3	....	....	6	2	4	....	....	....	....	....	2	....	....	2	..

TABLE NO. XIII.

CLASS III.—LOCAL

ORDER 4.—Digestive Organs.

TOWNS IN CHESHIRE COUNTY.	Gastritis.	Enteritis.	Peritonitis.	Ascites.	Ulceration of Intestines.	Hernia.	Ileus.	Intussusception.	Stricture of Intestines.	Fistula.	Stomach Diseases.	Pancreas Diseases.	Hepatitis.	Jaundice.	Liver Diseases.	Spleen Diseases.	Bowel Diseases.	Total. M.	Total. F.
Alstead																			
Chesterfield			1																1
Dublin		1				1													2
Fitzwilliam																	1	1	
Gilsum															1				1
Harrisville																			
Hinsdale																			
Jaffrey											1							1	
Keene		2													2			1	3
Marlborough																			
Marlow			2															1	1
Nelson																			
Richmond	1																	1	
Rindge		1									1							1	1
Roxbury																			
Stoddard																			
Sullivan																	1	1	
Surry																			
Swanzey														1				1	
Troy																			
Walpole			1															1	
Westmoreland																			
Winchester											1		1						2

— *Continued.*

DISEASES. — *Continued.*

Order 5. — Urinary Organs.													Order 6 — Generative Organs.			Order 7. — Osseous and Locomotory System.					Order 8. — Integumentary System.					Total for Class III.			
Nephritis.	Ischuria.	Nephria (Bright's Disease).	Diabetes.	Calculus (Gravel, etc.).	Cystitis.	Prostate, Disease of.	Kidney Diseases.	Bladder, Diseases of.	Testicles, Disease of.	Total.			Ovarian Dropsy.	Disease of Uterus.	Total.	Bones, Diseases of.	Joint Diseases.	Vertebræ, Diseases of.	Total.		Phlegmon.	Ulcer.	Skin Diseases.	Total.		Male.	Female.	Sex not stated.	Total.
										M.	F.							M.	F.					M.	F.				
..	..	..	..	..	1	..	..	..	..	1	..		..	..	..	..	..	..	..	..	..	..	..	..	..	3	3	..	6
..	..	..	..	..	..	..	..	..	..	..	..		..	..	..	..	..	1	..	1	..	..	..	..	..	6	4	..	10
..	..	..	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..	..	..	..	..	1	7	..	8
..	..	1	..	..	..	..	..	..	..	..	1		..	..	..	..	..	..	..	..	..	..	..	..	..	5	6	..	11
..	..	..	..	..	1	..	..	..	..	1	..		1	..	1	..	..	..	..	..	..	..	..	..	..	4	2	..	6
..	..	..	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	3
..	..	..	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..	..	..	..	..	2	5	..	7
2	..	..	..	..	..	..	..	..	..	..	2		..	..	..	..	..	..	..	..	..	..	..	..	..	4	6	..	10
..	..	4	..	..	1	..	..	..	..	4	1		..	..	..	..	1	..	1	..	..	..	..	..	..	22	25	..	47
..	..	2	..	..	..	..	..	..	..	1	1		..	..	..	..	..	..	..	..	..	..	..	..	..	5	5	..	10
..	..	..	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..	..	..	..	..	4	2	..	6
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..	..	..	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	1	..	..	1	..	5	1	..	6
..	..	..	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..	..	..	..	..	4	6	..	10
..	..	..	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	..	5
..	..	..	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	3
..	..	..	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
..	..	1	..	..	..	..	..	..	..	1	..		..	..	..	..	..	..	..	..	..	..	..	..	..	9	5	..	14
..	..	..	1	..	..	..	..	..	..	..	1		..	..	..	..	..	..	..	..	..	..	..	..	..	1	3	..	4
..	..	..	..	..	..	..	1	..	..	..	1		..	..	..	..	..	..	..	..	..	..	..	..	..	11	6	..	17
1	..	..	..	..	..	1	1	..	..	3	..		..	..	..	..	..	..	..	..	..	..	..	..	..	9	9	..	18
..	..	..	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..	..	..	..	..	4	9	1	14

TABLE NO. XIII.

TOWNS IN CHESHIRE COUNTY.	CLASS IV. — DEVELOPMENTAL DISEASES.																			
	ORDER 1. — Of Children.										ORDER 2. — Of Women.			ORDERS 3 and 4.				Total for Class IV.		
	Still-born.	Debility, Infantile.	Debility, Premature Birth.	Cyanosis.	Spina Bifida.	Other Malformations.	Teething.	Innutrition.	Total.		Childbirth.	Paramenia.	Total.	Old Age.		Atrophy and Debility.		Male.	Female.	Total.
									M.	F.				M.	F.	M.	F.			
Alstead	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	...	1
Chesterfield	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	1	...	1
Dublin	..	..	1	..	..	..	..	..	1	..	..	..	..	..	2	..	..	1	2	3
Fitzwilliam	..	1	..	..	..	..	..	..	..	1	..	..	..	1	2	..	..	1	3	4
Gilsum	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Harrisville	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	1	1	2
Hinsdale	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	...	1	1
Jaffrey	1	..	1	..	..	..	..	..	2	..	..	..	..	..	2	..	..	2	2	4
Keene	4	2	..	..	..	..	..	..	5	1	..	..	..	5	5	..	2	10	8	18
Marlborough	1	1	..	..	..	..	..	..	2	..	..	1	1	1	4	..	..	3	5	8
Marlow	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	...	1	1
Nelson	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	2	...	2
Richmond	..	..	..	..	..	..	..	..	..	..	1	..	1	1	..	..	1	1	2	3
Rindge	4	..	..	..	..	..	..	..	..	4	1	..	1	..	5	1	..	1	10	11
Roxbury	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...	...	..
Stoddard	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	...	1	1
Sullivan	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	...	1	2
Surry	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	1	1	2
Swanzey	..	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	2	...	1
Troy	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...	...	...
Walpole	1	1	..	..	1	..	..	..	1	2	..	..	..	2	2	..	..	3	4	7
Westmoreland	..	..	..	..	..	..	..	..	..	..	..	..	..	4	..	..	..	4	...	4
Winchester	1	..	..	..	..	..	..	1	..	2	..	..	..	1	2	..	1	1	5	6

— Continued.

CLASS V. — VIOLENT DEATHS.																																Grand Total for all Classes.			
ORDER 1. — Accident and Negligence.									ORDER 2.		ORDER 3. — Suicide.									ORDER 4. — Various.				Total for Class V.											
Fractures and Contusions.	Wounds, Unspecified.	Burns and Scalds.	Poison.	Drowning.	Suffocation.	Various.	Total.		Homicide.		Wounds, Unspecified.	Wounds, Pistol or Gunshot.	Wounds, Knife.	Poison.	Drowning.	Hanging.	Otherwise.	Total.		Violent, not Classed.		Cause not Reported.		Male.	Female.	Total.						Male.	Female.	Not stated.	Total.
							M.	F.	M.	F.								M.	F.	M.	F.	M.	F.												
..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1	2	..	..	..	..	..	9	7	..	16
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8	10	..	18
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	10	..	12
..	1	..	..	2	..	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	3	..	..	..	..	..	10	12	..	22
1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	5	4	..	9
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1	..	..	..	..	..	5	4	..	9
..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	2	3	..	..	..	..	..	10	19	..	29
..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	12	11	..	23
2	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	5	4	5	9	..	..	..	..	..	70	62	3	135
..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	12	12	..	24
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	8	..	14
..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	5	2	..	7
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	..	2	..	..	..	..	..	8	5	..	13
..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	2	..	2	..	..	..	..	..	9	20	..	29
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	1	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	2	..	2	..	..	..	..	..	3	7	..	10
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1	..	..	..	..	..	4	5	..	9
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	4
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	18	11	..	29
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	8	..	10
1	..	..	..	2	..	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	3	..	..	..	..	..	19	13	..	32
..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	2	2	4	..	..	..	..	..	17	15	1	33
..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	2	3	..	..	..	..	..	11	23	2	36

TABLE NO. XIII.

TOWNS IN SULLIVAN COUNTY.	CLASS I.— ORDER 1. — Miasmatic.																					
	Carbuncle.	Cholera, Asiatic.	Cholera, Sporadic.	Cholera Infantum.	Cholera Morbus.	Croup (Pseudo-membranous).	Diphtheria.	Diarrhœa.	Dysentery.	Erysipelas.	Fever, Bilious.	Fever, Cerebro-spinal.	Fever, Intermittent.	Fever, Malarial.	Fever, Typhoid.	Fever, Typho-malarial.	Fever, Unspecified.	Fever, Yellow.	Influenza (Epidemic).	Measles.	Mumps.	Metria (Puerperal Fever).	Pertussis.
Acworth	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Charlestown	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..
Claremont	..	..	..	4	..	1	4	..	3	..	..	2	..	..	2	..	..	..	..	..	..	1	..
Cornish	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Croydon	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Goshen	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Grantham	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Langdon	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Lempster	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Newport	..	..	..	3	..	..	2	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..
Plainfield	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Springfield	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Sunapee	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Unity	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Washington	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..

— *Continued.*

ZYMOTIC DISEASES.

						ORDER 2.—Enthetic.									ORDER 3.—Dietic.					ORDER 4.—Parasitic.					Total for Class I.			
Tonsilitis.	Scarlatina.	Small-pox.	Varicella.	Total. M.	Total. F.	Glanders.	Gonorrhœa.	Hydrophobia.	Malignant Pustule.	Septicæmia.	Syphilis.	Total. M.	Total. F.	Alcoholism.	Delirium Tremens.	Inanition.	Purpura and Scurvy.	Total. M.	Total. F.	Aphthæ.	Worms.	Other Parasites.	Total. M.	Total. F.	Male.	Female.	Sex not stated.	Total.
..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
..	..	..	..	1	1	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	2	..	3
..	..	..	..	8	9	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8	9	..	17
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
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..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2
..	..	..	..	3	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	4	..	7
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	1	1	..	2
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	1	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2

8

TABLE NO. XIII.

CLASS II. — CONSTITUTIONAL DISEASES.

TOWNS IN SULLIVAN COUNTY.	ORDER 1. — Diathetic.												ORDER 2. — Tubercular.						Total for Class II.		
	Gout.	Dropsy.	Anæmia.	Cancer, Various.	Cancer of Breast.	Cancer of Stomach.	Cancer of Uterus.	Noma (Canker).	Mortification.	Rheumatism.	Total. M.	Total. F.	Scrofula.	Tubes Mesenterica.	Phthisis.	Hydrocephalus.	Tubercular Meningitis.	Total. M.	Total. F.	Male.	Female.	Total.
Acworth						2					1	1								1	1	2
Charlestown				2					1		1	2			4			1	3	2	5	7
Claremont		2	1	3	1	1					1	7			7		1	4	4	5	11	16
Cornish							1		1			2			4			2	2	2	4	6
Croydon		1										1									1	1
Goshen																						
Grantham																						
Langdon																						
Lempster			1	1								2			2			1	1	1	3	4
Newport			1	2						1	2	2			5			1	4	3	6	9
Plainfield															2			2		2		2
Springfield															1			1		1		1
Sunapee				1								1			3			3		3	1	4
Unity																						
Washington																						

— *Continued.*

CLASS III. — LOCAL DISEASES.

ORDER 1. — Nervous System.													ORDER 2. — Circulatory System.					ORDER 3. — Respiratory System.									
Cephalitis.	Cerebritis.	Apoplexy.	Paralysis.	Insanity.	Chorea.	Epilepsy.	Tetanus.	Convulsions.	Brain Diseases.	Total.		Pericarditis.	Aneurism.	Heart Diseases.	Total.		Epistaxis.	Laryngitis.	Bronchitis, Acute.	Bronchitis, Chronic.	Pleurisy.	Pneumonia.	Asthma.	Lung Diseases.	Total.	
										M.	F.				M.	F.									M.	F.
..	..	1	1	..	..	..	..	..	..	1	1	1	...	2	2	1	..	..	..	..	..	6	..	..	2	4
..	..	3	1	..	..	..	..	..	..	3	1	..	...	2	2	..	..	..	..	1	..	2	..	..	2	1
1	1	2	3	..	..	..	..	2	..	5	4	..	...	11	3	8	..	..	1	..	..	7	..	..	6	2
..	..	1	..	..	..	..	..	..	..	..	1	..	...	3	1	2	..	..	..	..	..	3	..	..	3	..
..	..	2	..	..	..	..	..	..	..	..	2	..	...	2	1	1	..	..	..	..	..	2	..	1	1	2
..	..	..	..	..	..	..	..	..	..	..	..	..	...	4	1	3	..	..	..	..	..	..	..	..	..	..
..	..	1	..	..	..	..	..	..	..	1	..	..	...	2	..	2	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	...	..	..	..	..	..	..	..	..	2	..	..	..	2
..	1	..	..	..	..	..	..	..	..	..	1	..	...	2	..	2	..	..	..	..	..	2	..	..	..	2
1	3	3	2	..	..	1	..	..	1	3	8	..	...	4	2	2	..	..	2	..	..	2	..	..	2	2
..	..	1	1	..	..	..	..	..	..	..	2	..	...	2	2	..	..	..	..	..	..	1	..	..	1	..
..	..	3	..	1	..	..	..	..	..	..	4	..	...	3	2	1	..	..	..	..	..	1	..	..	1	..
..	..	1	..	..	..	..	..	..	..	..	1	..	...	..	..	..	..	..	..	..	..	..	..	1	1	..
..	..	..	2	..	..	..	..	1	..	1	2	..	...	2	1	1	..	..	..	..	..	3	..	..	1	2
..	..	..	1	1	..	..	..	..	1	2	1	..	...	..	..	..	..	..	..	..	..	..	..	..	..	..

TABLE NO. XIII.

CLASS III. — LOCAL

ORDER 4. — Digestive Organs.

TOWNS IN SULLIVAN COUNTY.	Gastritis.	Enteritis.	Peritonitis.	Ascites.	Ulceration of Intestines.	Hernia.	Ileus.	Intussusception.	Stricture of Intestines.	Fistula.	Stomach Diseases.	Pancreas Diseases.	Hepatitis.	Jaundice.	Liver Diseases.	Spleen Diseases.	Bowel Diseases.	Total. M.	Total. F.
Acworth	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	..	3
Charlestown	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Claremont	1	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	2	1
Cornish	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Croydon	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Goshen	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..
Grantham	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Langdon	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Lempster	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
Newport	..	..	2	..	..	..	..	..	..	..	..	..	1	..	1	..	..	2	2
Plainfield	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Springfield	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	1
Sunapee	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
Unity	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..
Washington	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1

— *Continued.*

DISEASES. — *Continued.*

Order 5. — Urinary Organs.												Order 6 — Generative Organs.			Order 7. — Osseous and Locomotory System.					Order 8. — Integumentary System.					Total for Class III.			
Nephritis.	Ischuria.	Nephria (Bright's Disease).	Diabetes.	Calculus (Gravel, etc.).	Cystitis.	Prostate, Disease of.	Kidney Diseases.	Bladder, Diseases of.	Testicles, Disease of.	Total.		Ovarian Dropsy.	Disease of Uterus.	Total.	Bones, Diseases of.	Joint Diseases.	Vertebræ, Diseases of.	Total.		Phlegmon.	Ulcer.	Skin Diseases.	Total.		Male.	Female.	Sex not stated.	Total.
										M.	F.							M.	F.				M.	F.				
..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	9	..	15
..	..	2	..	..	..	..	1	..	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	9	3	..	12
..	..	5	..	..	..	..	2	..	..	5	2	..	..	..	..	..	..	..	..	..	..	..	..	..	21	17	..	38
..	..	1	..	..	1	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	5	4	..	9
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	5	..	7
..	..	1	..	..	..	..	1	..	..	1	1	..	..	..	..	..	..	..	..	..	1	..	..	1	3	5	..	8
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	3
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2
..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8	..	8
..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	10	14	..	24
1	..	1	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	3	4	..	7
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	6	..	10
..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	1	..	4
..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	4	6	..	10
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	4

TABLE NO. XIII.

TOWNS IN SULLIVAN COUNTY.	CLASS IV. — DEVELOPMENTAL DISEASES.																				
	ORDER 1. — Of Children.										ORDER 2. — Of Women.			ORDERS 3 and 4.				Total for Class IV.		
	Still-born.	Debility, Infantile.	Debility, Premature Birth.	Cyanosis.	Spina Bifida.	Other Malformations.	Teething.	Innutrition.	Total.		Childbirth.	Paramenia.	Total.	Old Age.		Atrophy and Debility.		Male.	Female.	Total.
								M.	F.					M.	F.	M.	F.			
Acworth	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Charlestown	..	..	..	..	..	..	..	1	1	..	..	..	..	..	1	1	1	2	2	4
Claremont	..	..	3	..	1	..	..	2	2	4	1	..	1	2	3	2	3	6	11	17
Cornish	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	2	1	3
Croydon	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	1
Goshen	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	1
Grantham	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	1	1	2
Langdon	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1
Lempster	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Newport	3	..	..	..	..	1	..	..	3	1	..	..	..	..	1	..	..	3	2	5
Plainfield	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1
Springfield	..	..	..	..	..	1	..	..	..	1	..	..	..	..	1	..	..	..	2	2
Sunapee	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	2	2
Unity	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	1	2	2	4
Washington	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

— *Continued.*

CLASS V. — VIOLENT DEATHS. ORDER 1. — Accident and Negligence. Fractures and Contusions.	Wounds, Unspecified.	Burns and Scalds.	Poison.	Drowning.	Suffocation.	Various.	Total. M.	Total. F.	ORDER 2. Homicide. M.	Homicide. F.	ORDER 3. — Suicide. Wounds, Unspecified.	Wounds, Pistol or Gunshot.	Wounds, Knife.	Poison.	Drowning.	Hanging.	Otherwise.	Total. M.	Total. F.	ORDER 4. — Various. Violent, not Classed. M.	Violent, not Classed. F.	Cause not Reported. M.	Cause not Reported. F.	Total for Class V. Male.	Total for Class V. Female.	Total for Class V. Total.	Grand Total for all Classes. Male.	Female.	Not stated.	Total.
..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	8	11	..	19
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	14	12	..	26
..	..	..	..	..	..	2	2	..	..	..	..	1	..	..	..	..	..	1	..	..	..	2	1	5	1	6	45	49	..	94
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1	9	10	..	19
..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	3	7	..	10
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	6	..	9
..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	2	3	5	..	8
..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	4	..	5
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	11	..	14
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	20	26	..	46
1	..	..	..	..	..	..	1	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	3	8	5	..	13
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	8	..	13
..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1	1	..	..	..	..	1	1	2	8	6	..	14
1	..	1	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	3	1	4	9	9	..	18
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	2	..	6

TABLE NO. XIII.

CLASS I. —

ORDER I. — Miasmatic.

TOWNS IN GRAFTON COUNTY.	Carbuncle.	Cholera, Asiatic.	Cholera, Sporadic.	Cholera Infantum.	Cholera Morbus.	Croup (Pseudo-membranous).	Diphtheria.	Diarrhea.	Dysentery.	Erysipelas.	Fever, Bilious.	Fever, Cerebro-spinal.	Fever, Intermittent.	Fever, Malarial.	Fever, Typhoid.	Fever, Typho-malarial.	Fever, Unspecified.	Fever, Yellow.	Influenza (Epidemic).	Measles.	Mumps.	Metria (Puerperal Fever).	Pertussis.
Alexandria																							
Ashland				1						1													
Bath																							
Benton															1								
Bethlehem				2																1			
Bridgewater				1			1																
Bristol				3			4							1	2	1	1						
Campton								1				1											
Canaan							1								1								1
Dorchester																							
Easton																							
Ellsworth																							
Enfield									1														
Franconia																							
Grafton								2															
Groton																			1				
Hanover								1	1	1		1								1			
Haverhill				2			2			1					3								
Hebron																							
Holderness										1													
Landaff																							
Lebanon				1						1					1				2				
Lincoln																							
Lisbon							1								1							2	
Littleton				4				2															
Livermore																							
Lyman								1							1								
Lyme																							
Monroe																							
Orange																							
Orford				1					1														
Piermont																							
Plymouth																							
Rumney															2								
Thornton																							
Warren															1								
Waterville																							
Wentworth				1																			
Woodstock																							

— *Continued.*

ZYMOTIC DISEASES.

						Order 2. — Enthetic.									Order 3. — Dietic.					Order 4. — Parasitic.					Total for Class I.			
Tonsilitis.	Scarlatina.	Small-pox.	Varicella.	Total. M.	Total. F.	Glanders.	Gonorrhea.	Hydrophobia.	Malignant Pustule.	Septicæmia.	Syphilis.	Total. M.	Total. F.	Alcoholism.	Delirium Tremens.	Inanition.	Purpura and Scurvy.	Total. M.	Total. F.	Aphthæ.	Worms.	Other Parasites.	Total. M.	Total. F.	Male.	Female.	Sex not stated.	Total.
				1	1																				1	1		2
					1																					1		1
				1	2					1		1													2	2		4
				2																					2			2
				5	7																				5	7		12
					2																					2		2
				1	2					2			2												1	4		5
					1					1			1													2		2
				2																					2			2
					1																					1		1
				1	4									1				1							2	4		6
				5	3																				5	3		8
					1																					1		1
				1	4																				1	4		5
				2	2																				2	2		4
	1			4	3																				4	3		7
				1	1																				1	1		2
				1	1																				1	1		2
				1	1																				1	1		2
					1																					1		1
				1																					1			1
										1			1													1		1

TABLE NO. XIII.

TOWNS IN GRAFTON COUNTY.	CLASS II.—CONSTITUTIONAL DISEASES.																				
	ORDER 1.—Diathetic.													ORDER 2.—Tubercular.						Total for Class II.	
	Gout.	Dropsy.	Anæmia.	Cancer, Various.	Cancer of Breast.	Cancer of Stomach.	Cancer of Uterus.	Noma (Canker).	Mortification.	Rheumatism.	Total. M.	Total. F.	Scrofula.	Tabes Mesenterica.	Phthisis.	Hydrocephalus.	Tubercular Meningitis.	Total. M.	Total. F.	Male.	Female.	Total.
Alexandria				1							1		1		2			2	1	3	1	4
Ashland															1			1		1		1
Bath				1								1									1	1
Benton															1				1		1	1
Bethlehem				1							1									1		1
Bridgewater																						
Bristol				1							1				7			2	5	3	5	8
Campton				2								2			2				2		4	4
Canaan		1		1							1	1			1				1	1	2	3
Dorchester													1		2			1	2	1	2	3
Easton																						
Ellsworth		1										1			1			1		1	1	2
Enfield				3							1	2			1			1		2	2	4
Franconia																						
Grafton						1						1									1	1
Groton																						
Hanover				2			1					3	1		4			3	2	3	5	8
Haverhill		1		2							2	1			3			1	2	3	3	6
Hebron															1				1		1	1
Holderness		1									1			1					1	1	1	2
Landaff																						
Lebanon				2						1	2	1			5			3	2	5	3	8
Lincoln																						
Lisbon		1		3						1	4	1			1			1		5	1	6
Littleton		1		1			1					3			10		1	7	4	7	7	14
Livermore																						
Lyman					1							1			2				2		3	3
Lyme				3		1				1	3	2			2				2	3	4	7
Monroe																						
Orange				1							1									1		1
Orford				1						1	1	1			2			2		3	1	4
Piermont				1							1									1		1
Plymouth		1										1			1	1		1	1	1	2	3
Rumney		1									1				3			1	2	2	2	4
Thornton		1									1				2		1		3	1	3	4
Warren															1				1		1	1
Waterville																						
Wentworth															2				2		2	2
Woodstock				2								2			1				1		3	3

— *Continued.*

CLASS III. — LOCAL DISEASES.

Order 1. — Nervous System.												Order 2. — Circulatory System.					Order 3. — Respiratory System.									
Cephalitis.	Cerebritis.	Apoplexy.	Paralysis.	Insanity.	Chorea.	Epilepsy.	Tetanus.	Convulsions.	Brain Diseases.	Total. M.	Total. F.	Pericarditis.	Aneurism.	Heart Diseases.	Total. M.	Total. F.	Epistaxis.	Laryngitis.	Bronchitis, Acute.	Bronchitis, Chronic.	Pleurisy.	Pneumonia.	Asthma.	Lung Diseases.	Total. M.	Total. F.
..	..	1	..	..	..	1	..	..	1	1	2	..	..	1	..	1	..	..	..	..	..	1	..	..	1	..
..	..	..	4	..	..	..	..	..	..	2	2	..	..	..	..	..	..	..	1	..	..	1	..	..	..	2
..	..	1	..	..	..	..	..	..	..	1	..	..	..	2	1	1	..	..	..	..	..	1	2	..	2	1
1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1	..	..	1	..	..	..	..	1	..	1	2	..	..	1	1	..	..	..	1	..	..	2	..	..	1	2
..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..
1	..	1	..	..	..	..	..	..	..	2	..	..	..	3	1	2	..	..	..	..	..	1	..	..	..	1
..	1	1	1	..	..	..	..	..	..	1	2	..	..	2	1	1	..	..	..	..	1	1	..	..	2	..
1	..	3	..	..	..	..	..	..	..	2	2	..	..	..	..	..	..	..	1	..	..	5	..	..	4	2
..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..
1	..	3	2	..	..	..	..	1	..	3	4	1	..	3	1	3	..	..	..	1	..	3	..	..	1	3
1	..	1	2	..	..	..	..	..	1	2	3	..	..	1	1	..	..	..	..	..	..	5	..	..	2	3
1	..	1	2	..	..	..	..	..	..	1	3	..	..	..	..	..	..	..	1	..	..	3	1	..	3	2
..	..	..	1	..	..	..	..	..	..	1	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..
1	..	1	2	..	..	..	..	..	4	2	6	..	..	3	..	3	..	..	..	..	..	1	..	..	..	1
..	1	1	2	1	..	..	1	..	1	3	4	..	..	2	1	1	..	..	..	..	..	5	..	..	4	1
..	..	2	..	..	..	..	..	..	..	1	1	..	..	2	..	2	..	..	..	..	..	..	..	..	..	..
..	..	1	..	..	..	..	1	..	..	2	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	1	3	..	..	..	..	..	2	..	..	2	..
1	..	4	1	..	..	..	..	2	2	4	6	..	..	2	..	2	..	..	..	..	..	2	..	..	..	2
..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	1	1	..	..	..	6	..	6	..	..	1	..	..	2	..	..	2	1
1	..	1	5	..	..	..	..	..	1	5	3	..	..	..	..	..	..	..	..	..	..	5	..	..	4	1
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	2	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	3	..	..	1	2
..	1	1	1	..	..	..	..	2	1	5	1	..	..	2	1	1	..	..	..	..	..	2	..	..	..	2
2	..	..	1	..	..	..	..	..	..	1	2	..	..	..	..	..	..	..	1	..	..	4	..	..	3	2
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	2
1	..	..	1	..	..	..	..	1	1	2	2	..	..	4	1	3	..	..	..	1	..	3	..	..	3	1
..	..	1	..	..	..	..	..	..	..	..	1	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..
..	..	3	1	..	..	..	..	1	2	5	2	..	..	2	1	1	..	..	..	..	..	2	..	..	1	1
..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	3	..	..	..	..	..	..	2	..	..	1	1
..	1	..	..	..	..	..	..	..	..	..	1	..	..	3	1	2	..	..	..	..	..	2	..	..	1	1
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	2
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	1	1

TABLE NO. XIII.

TOWNS IN GRAFTON COUNTY.	CLASS III.—LOCAL																	
	ORDER 4.—Digestive Organs.																	
	Gastritis.	Enteritis.	Peritonitis.	Ascites.	Ulceration of Intestines.	Hernia.	Ileus.	Intussusception.	Stricture of Intestines.	Fistula.	Stomach Diseases.	Pancreas Diseases.	Hepatitis.	Jaundice.	Liver Diseases.	Spleen Diseases.	Bowel Diseases.	Total. M.	Total. F.
Alexandria	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ashland	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	1	1
Bath	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..
Benton	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Bethlehem	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Bridgewater	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..
Bristol	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Campton	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	1
Canaan	1	1	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	2	2
Dorchester	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Easton	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
Ellsworth	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Enfield	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3
Franconia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Grafton	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
Groton	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hanover	..	1	..	..	1	..	..	..	..	..	..	..	..	1	2	..	..	2	3
Haverhill	2	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	2	2
Hebron	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Holderness	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Landaff	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
Lebanon	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
Lincoln	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Lisbon	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Littleton	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..
Livermore	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Lyman	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
Lyme	..	..	1	..	..	..	1	..	..	..	..	..	1	..	..	..	..	2	1
Monroe	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Orange	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Orford	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
Piermont	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Plymouth	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Rumney	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Thornton	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Warren	..	1	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	3
Waterville	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Wentworth	..	..	1	..	..	..	..	..	..	..	..	..	2	..	..	..	..	2	1
Woodstock	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

— *Continued.*

DISEASES. — *Continued.*

Order 5. — Urinary Organs.												Order 6 — Generative Organs.			Order 7. — Osseous and Locomotory System.					Order 8. — Integumentary System.					Total for Class III.			
Nephritis.	Ischuria.	Nephria (Bright's Disease).	Diabetes.	Calculus (Gravel, etc.).	Cystitis.	Prostate, Disease of.	Kidney Diseases.	Bladder, Disease of.	Testicles, Disease of.	Total. M.	Total. F.	Ovarian Dropsy.	Disease of Uterus.	Total.	Bones, Diseases of.	Joint Diseases.	Vertebræ, Diseases of.	Total. M.	Total. F.	Phlegmon.	Ulcer.	Skin Diseases.	Total. M.	Total. F.	Male.	Female.	Sex not stated.	Total.
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	3	..	5
1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	5	..	9
..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	5	3	..	8
..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	5	..	9
..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	4	..	7
..	..	..	..	..	..	..	2	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	4	..	11
1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	9	6	..	15
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	13	..	18
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	6	..	11
..	..	1	..	..	1	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	6	..	12
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2
1	1	..	..	..	1	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	13	..	20
1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11	8	..	19
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3	..	4
..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	1	..	4
..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	4	4	..	8
..	..	1	1	..	..	..	..	1	..	2	1	..	1	1	..	..	..	..	..	..	..	..	..	..	6	13	..	19
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
1	..	1	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	3	9	..	12
..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11	4	..	15
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	4	..	6
..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	1	..	..	..	..	..	9	6	..	15
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	4	..	8
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2
..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	6	8	..	14
..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	7	6	..	13
..	..	1	..	..	..	..	..	..	..	..	1	1	..	1	..	..	..	..	..	..	..	..	..	..	4	4	..	8
..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	2	5	..	7
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	3
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1	..	2	..	..	..	2	..	..	..	..	5	..	..	..	..	..	..	..	..	..	..	..	..	..	8	3	..	11
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TABLE NO. XIII.

TOWNS IN GRAFTON COUNTY.	CLASS IV. — DEVELOPMENTAL DISEASES.																		
	ORDER 1. — Of Children.									ORDER 2. — Of Women.			ORDERS 3 and 4.				Total for Class IV.		
	Still-born.	Debility, Infantile.	Debility, Premature Birth.	Cyanosis.	Spina Bifida.	Other Malformations.	Teething.	Innutrition.	Total.		Childbirth.	Paramenia.	Total.	Old Age.		Atrophy and Debility.		Male.	Female.	Total.
									M.	F.				M.	F.	M.	F.			
Alexandria	1									1				1				1	1	2
Ashland	1	1							2					1				3		3
Bath														1	1			1	1	2
Benton																				
Bethlehem														1	1			1	1	2
Bridgewater																				
Bristol	1		1						2						4			2	4	6
Campton	1		1						2					2	2		1	4	3	7
Canaan	1								1					1	2			2	2	4
Dorchester															1	1		1	1	2
Easton																				
Ellsworth																				
Enfield				1						1				1	1			1	2	3
Franconia																				
Grafton	1									1									1	1
Groton																				
Hanover	1									1				1	1			1	2	3
Haverhill			1						1						4	1		2	4	6
Hebron	1								1					1	1			2	1	3
Holderness														1				1		1
Landaff														1				1		1
Lebanon		1							1					1	1			2	1	3
Lincoln																				
Lisbon						1			1					1				2		2
Littleton	1		2					1	2	2				2			1	4	3	7
Livermore																				
Lyman											1		1	1				1	1	2
Lyme															1		1		2	2
Monroe																				
Orange																				
Orford														4	2	1		5	2	7
Piermont		1							1						1			1	1	2
Plymouth														2	1			2	1	3
Rumney	1								1					1	2			2	2	4
Thornton	1								1									1		1
Warren	1									1				1	1			1	2	3
Waterville																				
Wentworth														2				2		2
Woodstock																				

— Continued.

CLASS V. — VIOLENT DEATHS.

Order 1. — Accident and Negligence.									Order 2.		Order 3. — Suicide.									Order 4. — Various.				Total for Class V.			Grand Total for all Classes.			
Fractures and Contusions.	Wounds, Unspecified.	Burns and Scalds.	Poison.	Drowning.	Suffocation.	Various.	Total. M.	Total. F.	Homicide. M.	Homicide. F.	Wounds, Unspecified.	Wounds, Pistol or Gunshot.	Wounds, Knife.	Poison.	Drowning.	Hanging.	Otherwise.	Total. M.	Total. F.	Violent, not Classed. M.	Violent, not Classed. F.	Cause not Reported. M.	Cause not Reported. F.	Male.	Female.	Total.	Male.	Female.	Not stated.	Total.
																											6	5		11
						1	1																	1		1	10	6		16
																						3	1	3	1	4	9	6		15
																						1		1		1	2	3		5
																						2		2		2	10	8		18
						1	1																	1		1	5	1		6
						2	2																	2		2	15	20		35
																							1		1	1	11	14		25
																											13	14		27
																							1		1	1	2	5		7
																												2		2
																											3	2		5
																											8	19		27
																											5	6		11
						1	1																	1		1	9	8		17
		1						1														1		1	1	2	3	2		5
	1					1	1	1																1	1	2	14	25		39
				1			1																	1		1	22	18		40
																											3	5		8
																						1		1		1	6	3		9
																											5	4		9
	1					1	1	1																1	1	2	15	22		37
																												1		1
																							1		1	1	12	13		25
		1				1	2																1	2	1	3	28	18		46
																														...
				1			1																	1		1	5	9		14
						1	1																2	1	2	3	13	14		27
																											4	4		8
																											1	2		3
				2			2																	2		2	17	12		29
																						1		1		1	5	2		7
	1						1										1	1						2		2	12	9		21
1						1	2															1	1	3	1	4	12	10		22
																											4	8		12
1						1	2																	2		2	3	7		10
																														...
						1	1																	1		1	12	5		17
						1	1															1	1	2	1	3	3	6		9

TABLE NO. XIII.

CLASS I.—

ORDER 1.—Miasmatic.

TOWNS IN COÖS COUNTY.	Carbuncle.	Cholera, Asiatic.	Cholera, Sporadic.	Cholera Infantum.	Cholera Morbus.	Croup (Pseudo-membranous).	Diphtheria.	Diarrhœa.	Dysentery.	Erysipelas.	Fever, Bilious.	Fever, Cerebro-spinal.	Fever, Intermittent.	Fever, Malarial.	Fever, Typhoid.	Fever, Typho-malarial.	Fever, Unspecified.	Fever, Yellow.	Influenza (Epidemic).	Measles.	Mumps.	Metria (Puerperal Fever).	Pertussis.
Berlin				6				4	1			1			1		14			1		1	6
Carroll				1											1								
Clarksville															1								
Colebrook								1		1					3	1							
Columbia																							
Dalton				1			1		1														
Dummer																							
Errol															1								
Gorham				1					1						1								
Jefferson				1					2														
Lancaster							1	1															
Milan						1	5					1											
Millsfield																							
Northumberland							1		1			1			1								
Pittsburg				1																			
Randolph								1															
Shelburne						1	3																
Stark																							
Stewartstown										1													
Stratford							2					1			1								
Whitefield				3		1	1																

— *Continued.*

ZYMOTIC DISEASES.

						Order 2.—Enthetic.								Order 3.—Dietic.						Order 4.—Parasitic.					Total for Class I.			
Tonsilitis.	Scarlatina.	Small-pox.	Varicella.	Total. M.	Total. F.	Glanders.	Gonorrhœa.	Hydrophobia.	Malignant Pustule.	Septicæmia.	Syphilis.	Total. M.	Total. F.	Alcoholism.	Delirium Tremens.	Inanition.	Purpura and Scurvy.	Total. M.	Total. F.	Aphthæ.	Worms.	Other Parasites.	Total. M.	Total. F.	Male.	Female.	Sex not stated.	Total.
..	1	..	..	16	20	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	16	20	..	36
..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2
..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
..	..	..	..	3	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	3	..	6
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	3
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
..	..	..	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
..	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	3
..	..	..	..	..	2	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	3
..	..	..	..	5	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	2	..	7
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	1	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3	..	4
..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
..	..	..	..	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	..	..	4
..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
..	..	..	..	..	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	..	4
..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
..	..	..	..	3	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	2	..	5

TABLE NO. XIII.

TOWNS IN COÖS COUNTY.	CLASS II. — CONSTITUTIONAL DISEASES.																					
	ORDER 1. — Diathetic.												ORDER 2. — Tubercular.							Total for Class II.		
	Gout.	Dropsy.	Anæmia.	Cancer, Various.	Cancer of Breast.	Cancer of Stomach.	Cancer of Uterus.	Noma (Canker).	Mortification.	Rheumatism.	Total.		Scrofula.	Tabes Mesenterica.	Phthisis.	Hydrocephalus.	Tubercular Meningitis.	Total.		Male.	Female.	Total.
											M.	F.						M.	F.			
Berlin	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	1	2	1	2	3
Carroll	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Clarksville	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Colebrook	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Columbia	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	1
Dalton	..	..	..	1	..	..	..	..	..	..	1	..	..	..	1	..	..	1	..	2	..	2
Dummer	..	..	..	1	..	..	..	..	..	..	..	1	..	..	1	..	..	1	..	1	1	2
Errol	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1	1
Gorham	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Jefferson	..	..	..	1	..	1	..	..	..	..	1	1	1	..	..	..	..	..	1	1	2	3
Lancaster	..	..	..	2	..	..	..	..	..	..	..	2	..	..	7	..	..	4	3	4	5	9
Milan	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Millsfield	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Northumberland	..	2	..	1	..	..	..	..	..	..	1	2	..	..	..	1	..	..	1	1	3	4
Pittsburg	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	1
Randolph	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1	1
Shelburne	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Stark	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Stewartstown	..	2	..	..	..	..	..	..	..	..	1	1	..	..	1	..	..	..	1	1	2	3
Stratford	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	1
Whitefield	..	..	..	1	..	..	..	..	..	..	1	..	..	..	7	..	..	4	3	5	3	8

— *Continued.*

CLASS III. — LOCAL DISEASES.

ORDER 1. — Nervous System.												ORDER 2. — Circulatory System.					ORDER 3. — Respiratory System.								
Cephalitis.	Cerebritis.	Apoplexy.	Paralysis.	Insanity.	Chorea.	Epilepsy.	Tetanus.	Convulsions.	Brain Diseases.	Total.		Pericarditis.	Aneurism.	Heart Diseases.	Total.		Epistaxis.	Laryngitis.	Bronchitis, Acute.	Bronchitis, Chronic.	Pleurisy.	Pneumonia.	Asthma.	Lung Diseases.	Total.	
										M.	F.				M.	F.									M.	F.
4	..	..	..	..	..	..	..	3	..	6	1	...	...	4	3	1	..	..	..	..	..	4	..	..	2	2
..	..	..	..	..	..	..	..	..	..	..	..	..	...	2	1	1	..	..	..	..	..	3	..	..	2	1
..	..	..	..	..	..	..	..	..	1	..	1	...	...	...	...	...	..	..	..	..	..	..	..	..	..	..
..	..	1	..	1	..	..	..	..	..	1	1	...	...	1	1	...	..	..	..	..	..	3	..	..	1	2
..	..	..	..	..	..	..	..	..	..	..	..	...	...	2	1	1	..	1	..	..	..	2	..	..	..	3
..	..	..	..	..	..	..	..	..	..	..	..	...	...	1	1	...	..	..	..	..	..	1	..	..	..	1
..	..	..	..	..	..	..	..	..	..	..	..	...	...	...	...	...	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	...	...	...	...	...	..	..	..	..	..	..	..	..	..	..
..	..	1	..	..	..	..	..	..	..	1	..	...	...	...	...	...	..	..	..	..	..	1	..	..	..	1
..	..	..	..	..	..	..	..	..	1	1	..	...	...	...	...	...	..	..	..	..	..	1	..	..	..	1
..	..	..	..	1	..	1	..	1	1	1	3	...	...	3	1	2	..	..	..	..	1	2	..	..	1	2
..	..	1	3	..	..	..	..	..	..	1	3	...	...	1	1	...	..	..	..	..	..	..	1	..	1	..
..	..	..	..	..	..	..	..	..	..	..	..	...	...	...	...	...	..	..	..	..	..	..	..	..	..	..
2	..	1	1	..	..	..	..	..	..	..	4	...	...	1	1	...	..	..	..	..	..	1	..	..	1	..
..	..	..	..	..	..	..	..	..	..	..	..	...	...	...	...	...	..	..	1	..	..	..	..	..	..	1
..	..	..	..	..	..	..	..	..	..	..	..	...	...	...	...	...	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	...	...	...	...	...	..	..	..	..	..	..	..	..	..	..
1	..	..	..	..	..	..	..	..	..	1	..	...	...	...	...	...	..	..	..	..	..	..	..	..	..	..
..	..	..	..	1	..	..	..	..	1	1	1	...	...	2	2	...	..	..	..	..	..	1	..	..	1	..
..	..	1	..	..	..	..	..	1	1	1	2	...	...	4	1	3	..	..	..	..	..	2	..	..	..	2
3	..	2	..	..	..	..	..	1	..	3	3	...	...	1	...	1	..	..	..	..	..	5	..	..	5	..

TABLE NO. XIII.

CLASS III. — LOCAL

ORDER 4. — Digestive Organs.

TOWNS IN COÖS COUNTY.	Gastritis.	Enteritis.	Peritonitis.	Ascites.	Ulceration of Intestines.	Hernia.	Ileus.	Intussusception.	Stricture of Intestines.	Fistula.	Stomach Diseases.	Pancreas Diseases.	Hepatitis.	Jaundice.	Liver Diseases.	Spleen Diseases.	Bowel Diseases.	Total. M.	Total. F.
Berlin			1								1		2					3	1
Carroll		1																	1
Clarksville																			
Colebrook	1																	1	
Columbia						1												1	
Dalton																			
Dummer																			
Errol																			
Gorham		1																1	
Jefferson																			
Lancaster							1												1
Milan		1																	1
Millsfield																			
Northumberland													1					1	
Pittsburg																	1	1	
Randolph																			
Shelburne																			
Stark					1	1							1					3	
Stewartstown							1								1			2	
Stratford			1															1	
Whitefield			3										1					2	2

— *Continued.*

DISEASES. — *Continued.*

Order 5. — Urinary Organs.											Order 6 — Generative Organs.		Order 7. — Osseous and Locomotory System.					Order 8. — Integumentary System.					Total for Class III.			
Nephritis.	Ischuria.	Nephria (Bright's Disease).	Diabetes.	Calculus (Gravel, etc.).	Cystitis.	Prostate, Disease of.	Kidney Diseases.	Bladder, Diseases of.	Testicles, Disease of.	Total. M.	Total. F.	Ovarian Dropsy.	Disease of Uterus.	Total.	Bones, Diseases of.	Joint Diseases.	Vertebræ, Diseases of.	Total. M.	Total. F.	Phlegmon.	Ulcer.	Skin Diseases.	Total. M.	Total. F.	Male.	Female.	Sex not stated.	Total.
..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	14	6	..	20
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	3	..	6
..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	1	..	2	1	..	3
2	..	..	..	..	..	..	..	..	..	..	2	..	1	1	..	..	..	..	..	..	..	..	..	..	4	6	..	10
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	4	..	6
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	3	9	..	12
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	4	..	7
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1	..	1	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	4	5	..	9
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	..	..	5
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	1	..	7
1	..	..	..	..	1	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	7	..	12
..	..	..	..	..	2	..	..	..	..	1	1	..	..	..	..	..	..	1	1	..	..	..	..	..	12	7	..	19

TABLE NO. XIII.

TOWNS IN COÖS COUNTY.	CLASS IV. — DEVELOPMENTAL DISEASES.																			
	ORDER 1. — Of Children.										ORDER 2. — Of Women.			ORDERS 3 and 4.				Total for Class IV.		
	Still-born.	Debility, Infantile.	Debility, Premature Birth.	Cyanosis.	Spina Bifida.	Other Malformations.	Teething.	Innutrition.	Total.		Childbirth.	Paramenia.	Total.	Old Age.		Atrophy and Debility.		Male.	Female.	Total.
									M.	F.				M.	F.	M.	F.			
Berlin	5	2	3	..	..	..	3	2	9	6	1	..	1	1	..	1	..	11	7	18
Carroll	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1
Clarksville	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1
Colebrook	..	1	..	..	..	..	..	..	1	..	..	..	..	..	4	..	1	1	5	6
Columbia	..	..	1	..	..	..	..	..	1	..	..	..	..	1	..	..	..	2	..	2
Dalton	..	..	1	..	..	..	..	..	1	..	..	..	..	..	1	..	..	1	1	2
Dummer	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Errol	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1
Gorham	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Jefferson	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	1	1	2
Lancaster	5	..	1	1	..	..	..	..	3	4	..	..	..	2	1	1	..	6	5	11
Milan	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Millsfield	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Northumberland	..	..	..	..	..	..	..	..	..	..	1	..	1	1	1	..	..	1	2	3
Pittsburg	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Randolph	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Shelburne	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Stark	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	2	..	2
Stewartstown	..	..	..	..	..	1	..	..	..	..	1	..	..	3	2	..	..	3	3	6
Stratford	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1
Whitefield	2	..	1	..	1	2	..	3	4	5	..	..	..	..	..	..	..	4	5	9

— Continued.

CLASS V. — VIOLENT DEATHS.																											Grand Total for all Classes.			
ORDER 1. — Accident and Negligence.									ORDER 2.		ORDER 3. — Suicide.									ORDER 4. — Various.				Total for Class V.						
Fractures and Contusions.	Wounds, Unspecified.	Burns and Scalds.	Poison.	Drowning.	Suffocation.	Various.	Total.		Homicide.		Wounds, Unspecified.	Wounds, Pistol or Gunshot.	Wounds, Knife.	Poison.	Drowning.	Hanging.	Otherwise.	Total.		Violent, not Classed.		Cause not Reported.		Male.	Female.	Total.	Male.	Female.	Not stated.	Total.
							M.	F.	M.	F.								M.	F.	M.	F.	M.	F.							
				1			1																1	1	1	2	42	36	1	79
2						2	4																	4		4	10	3		13
																											4	1		5
1							1							1					1					1	1	2	9	15		24
		1					1																	1		1	6	4		10
						2	2																	2		2	6	5		11
																						1	1	1	1	2	1	2	1	4
																											2	1		3
																						1		1		1	5	2		7
						1		1																	1	1	4	7		11
																	1		1						1	1	14	22		36
																											8	6		14
																						1	1	1	1	2	8	14		22
				1			1																2	1	2	3	3	4		7
																											1	1		2
																							1		1	1	4	1		5
																						2	2	2	2	4	9	3		12
																							1		1	1	10	8		18
						1	1																1	1	1	2	8	12		20
1						2	3																1	3	1	4	27	18		45

TABLE NO. XIII.

RECAPITULATION

CLASS I. —

ORDER 1. — Miasmatic.

COUNTIES.	Carbuncle.	Cholera, Asiatic.	Cholera, Sporadic.	Cholera Infantum.	Cholera Morbus.	Croup (Pseudo-membranous).	Diphtheria.	Diarrhœa.	Dysentery.	Erysipelas.	Fever, Bilious.	Fever, Cerebro-spinal.	Fever, Intermittent.	Fever, Malarial.	Fever, Typhoid.	Fever, Typho-malarial.	Fever, Un-specified.	Fever, Yellow.	Influenza (Epidemic).	Measles.	Mumps.	Metria (Puerperal Fever).	Pertussis.
Rockingham	..	..	..	40	1	5	22	7	11	4	1	4	..	..	12	..	2	..	..	1	..	..	5
Strafford	..	..	..	36	3	24	54	10	1	7	..	5	..	..	14	..	5	..	..	3	..	..	8
Belknap	..	..	..	23	..	..	2	3	5	..	1	1	..	1	7	..	..	..	..	1	..	1	3
Carroll	..	..	..	13	..	1	2	4	6	..	..	2	1	..	6	..	..	..	..	..	..	..	..
Merrimack	1	..	..	31	2	12	8	6	5	6	1	1	..	2	19	..	..	..	1	..	..	2	4
Hillsborough	1	..	..	147	5	37	56	18	21	3	..	2	..	3	36	..	3	..	..	6	..	4	15
Cheshire	..	..	..	25	1	5	35	4	5	..	1	1	..	1	6	..	3	..	..	2	..	2	5
Sullivan	..	..	..	8	..	1	8	2	4	..	..	3	..	..	4	..	..	..	..	..	..	2	..
Grafton	..	..	..	16	..	..	9	7	3	5	..	2	..	1	13	1	1	..	3	2	..	2	1
Coös	..	..	..	14	..	3	14	7	6	2	..	4	..	..	10	1	14	..	..	1	..	1	6
Total	2	..	..	353	12	88	210	68	67	27	4	25	1	8	127	2	28	..	4	16	..	14	47

— *Continued.*

BY COUNTIES.

ZYMOTIC DISEASES.

						Order 2. — Enthetic.								Order 3. — Dietic.						Order 4. — Parasitic.					Total for Class I.			
Tonsilitis.	Scarlatina.	Small-pox.	Varicella.	M.	F.	Glanders.	Gonorrhea.	Hydrophobia.	Malignant Pustule.	Septicæmia.	Syphilis.	Total. M.	Total. F.	Alcoholism.	Delirium Tremens.	Inanition.	Purpura and Scurvy.	Total. M.	Total. F.	Aphthæ.	Worms.	Other Parasites.	Total. M.	Total. F.	Male.	Female.	Sex not stated.	Total.
..	1	..	..	60	56	..	..	..	..	5	..	2	3	1	1	..	..	2	..	..	..	..	..	..	64	59	..	123
..	1	..	..	78	93	..	1	..	..	2	3	2	4	1	..	..	..	..	1	..	..	..	..	..	80	98	..	178
..	1	..	..	31	18	..	..	..	1	..	..	..	1	3	..	..	..	3	..	..	..	..	..	..	34	19	..	53
..	..	..	..	15	20	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	15	20	1	36
..	2	..	..	51	52	..	..	..	..	3	..	1	2	..	..	..	1	..	1	..	..	..	..	..	52	55	..	107
..	7	..	..	190	174	..	..	1	..	7	4	7	5	1	..	1	1	2	1	..	..	..	..	..	197	180	2	379
..	2	..	..	50	48	..	..	..	..	3	..	3	..	..	..	..	..	..	..	..	..	..	..	..	53	48	..	101
..	1	..	..	15	18	..	..	..	..	2	..	1	1	1	..	..	..	1	..	..	..	..	..	..	17	19	..	36
..	1	..	..	29	38	..	..	..	..	5	..	1	4	1	..	..	..	1	..	..	..	..	..	..	31	42	..	73
..	2	..	..	40	45	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	41	45	..	86
..	18	..	..	559	562	..	1	1	1	29	7	19	20	8	1	1	2	9	3	..	..	..	..	..	584	585	3	1,172

TABLE NO. XIII.

RECAPITULATION

COUNTIES.	CLASS II.—CONSTITUTIONAL DISEASES.																					
	ORDER 1.—Diathetic.												ORDER 2.—Tubercular.							Total for Class II.		
	Gout.	Dropsy.	Anæmia.	Cancer, Various.	Cancer of Breast.	Cancer of Stomach.	Cancer of Uterus.	Noma (Canker).	Mortification.	Rheumatism.	Total. M.	Total. F.	Scrofula.	Tabes Mesenterica.	Phthisis.	Hydrocephalus.	Tubercular Meningitis.	Total. M.	Total. F.	Male.	Female.	Total.
Rockingham ..	..	17	2	17	1	4	3	..	3	7	20	34	4	5	88	7	3	53	54	73	88	161
Strafford.....	..	6	17	8	..	2	1	2	1	3	17	23	..	3	75	..	3	32	49	49	72	121
Belknap	..	3	3	8	1	1	2	..	3	3	11	13	3	..	42	2	..	19	28	30	41	71
Carroll	..	4	..	8	..	2	..	1	..	2	6	11	..	..	29	2	2	15	18	21	29	50
Merrimack....	..	7	5	21	1	3	7	..	3	4	17	34	4	2	88	3	6	45	58	62	92	154
Hillsborough..	..	7	4	36	3	8	5	1	7	15	28	58	4	2	168	3	7	78	106	106	164	270
Cheshire	..	1	6	11	1	2	..	..	2	4	13	14	3	..	53	2	..	24	34	37	48	85
Sullivan	..	3	3	9	1	3	1	..	2	1	5	18	..	..	28	..	1	15	14	20	32	52
Grafton	..	9	..	28	1	2	2	..	..	4	22	24	3	1	58	1	2	27	38	49	62	111
Coös	..	5	..	9	..	1	..	..	..	..	8	7	1	..	22	1	..	11	13	19	20	39
Total	..	62	40	155	9	28	21	4	21	43	147	236	22	13	651	21	24	319	412	466	648	1,114

— *Continued.*

BY COUNTIES.

CLASS III. — LOCAL DISEASES.

ORDER 1. — Nervous System.												ORDER 2. — Circulatory System.					ORDER 3. — Respiratory System.									
Cephalitis.	Cerebritis.	Apoplexy.	Paralysis.	Insanity.	Chorea.	Epilepsy.	Tetanus.	Convulsions.	Brain Diseases.	Total. M.	Total. F.	Pericarditis.	Aneurism.	Heart Diseases.	Total. M.	Total. F.	Epistaxis.	Laryngitis.	Bronchitis, Acute.	Bronchitis, Chronic.	Pleurisy.	Pneumonia.	Asthma.	Lung Diseases.	Total. M.	Total. F.
14	2	34	35	1	..	3	1	10	21	42	79	1	...	85	49	37	...	..	8	3	2	68	..	7	44	44
12	5	16	14	2	..	1	..	10	14	36	38	3	...	42	24	21	..	1	11	3	1	38	2	3	22	37
8	..	20	22	..	..	3	..	6	7	29	37	1	...	34	17	18	..	..	4	1	..	37	1	..	26	17
3	1	18	7	..	..	1	..	2	6	23	15	...	...	31	16	15	..	..	7	..	1	49	2	1	25	35
14	5	46	23	24	..	4	..	5	28	71	78	4	...	82	46	40	..	..	8	1	3	86	1	1	47	53
35	5	59	31	1	..	3	..	21	19	92	82	4	...	125	68	61	..	1	54	7	8	131	1	2	89	115
12	1	13	19	1	..	3	1	4	7	25	36	...	...	54	29	25	..	..	7	..	..	52	1	1	31	30
2	5	18	11	2	..	1	..	3	2	16	28	1	...	39	17	23	..	..	3	1	..	31	..	2	20	17
13	4	28	30	1	..	1	1	9	17	51	53	1	...	50	17	34	..	..	6	2	1	64	3	3	41	38
10	..	7	4	3	..	1	..	6	5	17	19	...	...	22	13	9	..	1	1	..	1	26	1	..	14	16
123	28	259	196	35	..	21	3	76	126	402	465	15	...	564	296	283	..	3	109	18	17	582	12	20	359	402

TABLE NO. XIII.

RECAPITULATION

COUNTIES.	CLASS III.—LOCAL																		
	ORDER 4.—Digestive Organs.																		
	Gastritis.	Enteritis.	Peritonitis.	Ascites.	Ulceration of Intestines.	Hernia.	Ileus.	Intussusception.	Stricture of Intestines.	Fistula.	Stomach Diseases.	Pancreas Diseases.	Hepatitis.	Jaundice.	Liver Diseases.	Spleen Diseases.	Bowel Diseases.	Total. M.	Total. F.
Rockingham	6	7	8	..	..	..	3	..	..	1	6	..	2	1	7	..	4	16	29
Strafford	3	7	4	..	1	1	..	..	..	..	2	..	4	..	8	..	2	15	17
Belknap	3	7	7	..	..	..	..	..	..	..	1	..	1	..	..	..	1	10	10
Carroll	4	1	..	..	..	2	..	..	..	..	2	..	1	..	3	1	1	11	4
Merrimack	3	8	7	..	1	6	1	..	..	1	5	..	1	2	10	..	5	30	20
Hillsborough	13	13	10	1	4	2	2	1	..	..	7	..	6	2	12	..	2	32	43
Cheshire	1	4	4	..	..	1	..	..	..	..	3	..	1	1	3	..	2	9	11
Sullivan	2	..	6	..	..	1	..	..	..	..	..	..	2	..	5	..	2	8	10
Grafton	6	6	6	..	2	1	2	..	..	..	5	..	3	1	7	..	3	16	26
Coös	1	3	5	..	1	2	2	..	..	..	1	..	5	..	1	..	1	16	6
Total	42	56	57	1	9	16	10	1	..	2	32	..	26	7	56	1	23	163	176

— *Continued.*

BY COUNTIES.

DISEASES.— *Continued.*

Order 5.— Urinary Organs.												Order 6 — Generative Organs.			Order 7.— Osseous and Locomotory System.					Order 8.— Integumentary System.					Total for Class III.			
Nephritis.	Ischuria.	Nephria (Bright's Disease).	Diabetes.	Calculus (Gravel, etc.).	Cystitis.	Prostate, Disease of.	Kidney Diseases.	Bladder, Diseases of.	Testicles, Disease of.	Total. M.	Total. F.	Ovarian Dropsy.	Disease of Uterus.	Total.	Bones, Diseases of.	Joint Diseases.	Vertebræ, Diseases of.	Total. M.	Total. F.	Phlegmon.	Ulcer.	Skin Diseases.	Total. M.	Total. F.	Male.	Female.	Sex not stated.	Total.
..	..	21	5	..	2	2	8	1	..	24	15	..	..	..	1	..	1	2	..	3	..	..	1	2	178	206	..	384
3	..	15	2	1	3	1	1	..	..	12	14	2	..	2	..	1	..	..	1	..	..	..	..	..	109	130	..	239
2	..	4	4	..	2	1	2	..	..	12	3	1	..	1	..	..	..	..	..	..	..	..	..	..	94	86	..	180
..	..	4	2	..	..	..	2	1	..	7	2	..	..	..	1	..	1	2	..	1	..	..	..	1	84	72	..	156
6	..	23	4	..	5	1	4	1	..	30	14	2	..	2	..	..	1	..	1	..	..	..	..	..	224	208	..	432
3	..	26	5	2	6	..	12	..	..	31	23	2	3	5	2	1	..	2	1	..	..	..	..	..	314	* 331	..	645
3	..	8	1	..	3	1	2	..	..	11	7	1	..	1	..	1	1	1	1	1	..	..	1	..	106	111	1	218
1	..	13	..	..	2	..	5	..	..	12	9	..	..	..	..	..	..	..	..	..	1	..	..	1	73	88	..	161
6	1	11	2	1	4	1	7	..	..	23	10	1	1	2	..	..	1	..	1	..	..	..	..	..	148	164	..	312
4	..	3	..	..	3	..	1	..	..	6	5	..	1	1	..	..	1	1	..	2	..	..	1	1	68	57	..	125
28	1	128	25	4	30	7	44	3	..	168	102	9	5	14	4	3	6	8	5	7	1	..	3	5	1,398	1,453	1	2,852

* Includes one death from Otitis, which is not embraced in any of the orders given.

TABLE NO. XIII.

RECAPITULATION

COUNTIES.	CLASS IV. — DEVELOPMENTAL DISEASES.																		
	ORDER 1. — Of Children.										ORDER 2. — Of Women.			ORDERS 3 and 4.				Total for Class IV.		
	Still-born.	Debility, Infantile.	Debility, Premature Birth.	Cyanosis.	Spina Bifida.	Other Malformations.	Teething.	Innutrition.	Total.		Childbirth.	Paramenia.	Total.	Old Age.		Atrophy and Debility.		Male.	Female.	Total.
									M.	F.				M.	F.	M.	F.			
Rockingham	25	6	9	..	..	2	1	13	40	16	3	..	3	28	41	8	11	76	71	147
Strafford	13	12	2	5	..	1	1	10	25	19	7	1	8	19	19	7	6	51	52	103
Belknap	10	4	4	..	..	1	..	2	11	10	1	..	1	10	17	3	3	24	31	55
Carroll	3	2	2	..	..	1	..	..	6	2	2	..	2	10	12	..	..	16	16	32
Merrimack	32	6	13	3	..	4	..	9	39	28	2	..	2	17	34	4	13	60	77	137
Hillsborough	98	38	20	..	1	3	13	18	112	79	6	..	6	45	30	8	13	165	128	293
Cheshire	12	5	2	..	1	2	..	2	13	11	2	1	3	20	29	2	4	35	47	82
Sullivan	3	..	4	..	1	2	..	3	6	7	1	..	1	6	11	6	6	18	25	43
Grafton	12	3	5	1	..	1	..	1	16	7	1	..	1	27	27	3	3	46	38	84
Coös	12	3	7	1	1	3	3	5	19	16	2	..	2	14	10	3	1	36	29	65
Total	220	79	68	10	4	20	18	63	287	195	27	2	29	196	230	44	60	527	514	1,041

Continued.

COUNTIES.

CLASS V. — VIOLENT DEATHS.																														Grand Total for all Classes.			
ORDER 1. — Accident and Negligence.								ORDER 2.		ORDER 3. — Suicide.								ORDER 4. — Various.				Total for Class V.											
Wounds, Unspecified.	Burns and Scalds.	Poison.	Drowning.	Suffocation.	Various.	Total.		Homicide.		Wounds, Unspecified.	Wounds, Pistol or Gunshot.	Wounds, Knife.	Poison.	Drowning.	Hanging.	Otherwise.	Total.	Violent, not Classed.		Cause not Reported.													
						M.	F.	M.	F.								M.	F.	M.	F.	M.	F.											
..	..	1	3	2	13	18	7	..	..	..	..	..	..	..	..	2	1	1	..	..	17	16	36	24	60	422	448	5	875
..	1	1	4	1	4	11	3	..	..	..	..	..	1	..	1	3	4	1	..	..	21	10	36	14	50	322	366	3	691
1	1	..	2	..	2	8	2	..	..	..	1	..	..	..	2	1	4	..	..	..	7	9	19	11	30	201	188	..	389
1	..	1	2	..	5	8	3	..	..	..	..	..	..	..	..	..	..	..	..	..	7	6	15	9	24	150	146	2	298
2	3	..	3	..	12	21	7	..	2	..	..	..	..	1	..	1	1	1	..	..	16	13	38	23	61	428	455	8	891
2	6	3	7	2	19	36	10	..	..	..	..	..	..	2	1	6	6	3	..	..	53	45	95	58	153	851	861	28	1,740
3	..	1	6	..	4	12	6	..	..	..	1	..	..	..	..	..	1	..	..	..	9	11	22	17	39	248	271	6	525
..	1	..	1	..	5	7	2	1	1	..	2	..	..	..	1	..	2	1	..	..	5	3	15	7	22	143	171	..	314
3	2	..	4	..	13	21	3	..	..	..	..	..	..	..	..	1	1	..	..	..	11	9	33	12	45	307	318	..	625
..	1	..	2	..	8	14	1	..	..	..	..	..	1	..	..	1	..	2	..	..	5	11	19	14	33	181	165	2	348
12	15	7	34	5	85	156	44	1	3	..	4	..	2	3	5	15	20	9	..	..	151	133	328	189	517	3,253	3,389	54	6,696

TABLE NO. XIV.

Recapitulation of the Causes of Death by Classes and Orders, by Counties.

Causes of Death.	Rockingham.	Strafford.	Belknap.	Carroll.	Merrimack.	Hillsborough.	Cheshire.	Sullivan.	Grafton.	Coös.	Total for State.
All causes	875	691	389	298	891	1,740	525	314	625	348	6,696
Specified causes	842	660	373	285	862	1,642	505	306	605	332	6,412
Cause not stated	33	31	16	13	29	98	20	8	20	16	284
CLASSES.											
I — Zymotic diseases	123	178	53	36	107	379	101	36	73	86	1,172
II — Constitutional diseases	161	121	71	50	154	270	85	52	111	39	1,114
III — Local diseases	384	239	180	156	432	645	218	161	312	125	2,852
IV — Developmental diseases	147	103	55	32	137	293	82	43	84	65	1,041
V — Violent deaths	27	19	14	11	32	55	19	14	25	17	233
ORDERS.											
I — 1. Miasmatic diseases	116	171	49	35	103	364	98	33	67	85	1,121
2. Enthetic diseases	5	6	1	1	3	12	3	2	5	1	39
3. Dietic diseases	2	1	3	.....	1	3	.....	1	1	.....	12
4. Parasitic diseases	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

II — 1. Diathetic diseases	54	40	24	17	51	86	27	23	46	15	383
2. Tubercular diseases	107	81	47	33	103	184	58	29	65	24	731
III — 1. Diseases of nervous system	121	74	66	38	149	174	61	44	104	36	867
2. Diseases of organs of circulation	86	45	35	31	86	129	54	40	51	22	579
3. Diseases of respiratory organs	88	59	43	60	100	204	61	37	79	30	761
4. Diseases of digestive organs	45	32	20	15	50	75	20	18	42	22	339
5. Diseases of urinary organs	39	26	15	9	44	54	18	21	33	11	270
6. Diseases of generative organs	.....	2	1	.....	2	5	1	...	2	1	14
7. Diseases of osseous and locomotory organs	2	1	.....	2	1	3	2	.....	1	1	13
8. Diseases of integumentary system	3	.....	.....	1	.....	.....	1	1	.....	2	8
9. Diseases of organs of special sense	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1
IV — 1. Developmental diseases of children	56	44	21	8	67	191	24	13	23	35	482
2. Developmental diseases of women	3	8	1	2	2	6	3	1	1	2	29
3. Old age	69	38	27	22	51	75	49	17	54	24	426
4. Atrophy and debility	19	13	6	.....	17	21	6	12	6	4	104
V — 1. Accident and negligence	25	14	10	11	28	46	18	9	24	15	200
2. Homicide	.....	.....	.....	.....	2	.....	.....	2	.....	.....	4
3. Suicide	2	5	4	.....	2	9	1	3	1	2	29

TABLE NO. XV.

*Deaths by Ages, Sex, and Months, by Counties and Towns.**

TOWNS IN ROCKINGHAM COUNTY.		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
Atkinson	Males	1	2	..	..	..	1	..	1	1	1	..	1	..	..	..	..	..	2	2	..	..	2	1	..	..	1	..	8	...
	Females	...	..	..	2	..	..	..	..	..	..	1	..	..	..	..	1	..	1	1	..	..	..	..	..	..	..	..	3	11
Auburn	Males	...	1	..	..	1	..	..	1	2	1	2	..	..	..	..	..	..	1	1	..	1	1	1	1	1	1	..	8	...
	Females	...	..	..	1	..	..	1	..	4	2	2	1	..	..	2	..	..	1	..	..	3	1	..	..	3	1	..	11	19
Brentwood	Males	...	..	..	..	1	1	1	1	4	2	3	..	..	..	1	2	2	..	..	1	2	2	1	1	..	1	..	13	...
	Females	1	..	..	..	..	1	3	2	3	6	4	..	..	1	..	2	2	1	..	2	1	4	2	2	2	3	..	21	34
Candia	Males	1	1	1	..	2	1	..	..	..	3	1	..	..	..	2	2	..	..	1	..	..	1	1	..	2	1	..	10	...
	Females	...	1	..	..	1	..	..	1	2	..	3	..	..	..	1	2	..	..	2	..	..	..	1	..	..	2	..	8	18
Chester	Males	...	..	..	..	..	1	1	2	1	2	2	..	..	..	..	..	2	..	2	1	1	2	1	..	..	..	..	9	...
	Females	...	..	..	..	1	1	1	5	2	..	1	1	..	..	4	..	..	1	..	2	..	3	1	..	1	..	..	12	21
Danville	Males	1	1	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	3	..	..	4	...
	Females	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	2	6
Deerfield	Males	..	..	1	..	3	2	1	2	2	5	..	..	..	..	1	1	..	3	2	..	1	2	..	1	3	2	..	16	...
	Females	1	..	..	2	1	..	2	2	1	2	2	..	..	..	..	2	..	1	2	2	4	1	..	..	..	1	..	13	29
Derry	Males	5	2	..	..	1	1	1	..	1	1	2	..	..	..	..	1	1	2	..	1	2	2	..	1	2	2	..	14	...
	Females	1	1	1	1	2	1	3	1	1	4	4	..	..	..	1	1	1	..	1	..	2	3	4	2	2	3	..	20	34

East Kingston	Males	...	2	...	...	...	1	1	..	3	2	...	...	..	1	1	3	1	..	..	..	...	1	3	1	...	...	10	...
	Females	...	1	1	..	1	1	...	...	..	..	1	..	...	..	1	1	1	..	1	..	1	..	..	..	..	..	5	15
Epping	Males	3	..	1	..	1	..	1	1	3	1	1	..	...	..	..	..	1	2	..	1	..	1	1	3	2	1	..	12	...
	Females	5	2	3	1	..	4	1	3	1	1	3	1	...	..	2	..	4	1	3	..	1	2	..	3	3	6	..	25	37
Exeter	Males	2	2	1	2	5	..	3	1	2	2	3	..	...	..	2	1	2	2	4	..	3	1	2	1	3	2	..	23	...
	Females	1	4	1	..	2	1	3	5	8	8	5	1	...	..	7	4	4	2	3	2	2	3	2	1	5	4	..	39	62
Fremont	Males	1	2	...	...	...	...	...	...	..	1	1	..	...	..	..	..	..	1	1	..	1	1	1	..	..	..	..	5	...
	Females	...	..	...	...	2	..	...	...	..	2	..	..	...	..	..	1	..	..	..	..	..	..	..	1	2	..	..	4	9
Greenland	Males	...	..	...	2	..	..	...	1	1	..	..	1	..	..	..	..	..	..	1	1	..	1	..	..	..	2	..	5	...
	Females	...	..	1	2	..	1	..	1	1	1	..	..	..	..	1	..	..	..	..	1	1	..	..	2	..	2	..	7	12
Hampstead	Males	...	..	...	...	...	...	...	...	1	3	1	..	...	..	..	..	..	..	..	..	1	2	..	1	..	1	..	5	...
	Females	2	..	...	...	1	..	...	...	1	3	1	2	...	..	..	..	..	..	1	3	1	..	2	2	..	1	..	10	15
Hampton	Males	2	..	...	...	...	1	..	1	1	4	3	..	...	..	1	..	2	2	1	2	1	1	..	..	..	2	..	12	...
	Females	...	..	...	1	..	..	1	..	..	..	..	..	...	..	..	1	..	..	..	..	1	..	..	..	..	..	..	2	14
Hampton Falls	Males	...	..	...	...	...	...	...	...	..	2	1	..	...	..	..	..	..	..	1	1	1	..	..	..	..	..	..	3	...
	Females	1	..	...	...	..	1	..	...	..	..	..	..	...	..	..	1	..	..	..	..	..	..	..	..	..	1	..	2	5
Kensington	Males	...	..	...	...	...	...	...	...	2	1	..	1	...	..	2	1	..	..	..	..	..	..	..	1	..	..	..	4	...
	Females	1	..	...	...	...	...	...	2	2	..	1	..	...	..	..	2	1	..	..	1	..	1	1	..	..	..	..	6	10
Kingston	Males	2	..	...	...	...	2	1	1	..	2	..	1	...	..	..	..	1	..	1	2	1	1	1	..	..	2	..	9	...
	Females	2	2	..	..	1	..	..	1	1	3	3	..	...	..	..	..	..	..	..	1	..	2	2	5	3	..	..	13	22
Londonderry	Males	1	..	1	..	..	..	..	..	1	..	1	..	...	..	1	..	..	..	..	..	1	..	1	..	1	..	..	4	...
	Females	3	1	..	..	1	1	1	1	..	..	1	1	...	..	3	..	..	1	..	1	1	..	..	2	1	1	..	10	14

* Not including premature births and still births.

TABLE NO. XV. — *Continued.*

TOWNS IN ROCKINGHAM COUNTY. — *Continued.*		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
Newcastle	Males	1	1	..	..	..	..	1	1	1	..	2	..	..	..	..	1	..	1	..	..	..	..	1	2	2	..	..	7	...
	Females	1	..	..	..	..	1	..	2	1	1	..	..	..	..	1	..	2	1	..	1	1	..	..	..	..	..	..	6	13
Newington	Males	...	1	..	..	1	..	..	..	..	2	..	..	..	..	..	..	1	..	..	1	..	..	..	2	..	..	..	4	...
	Females	...	..	..	..	..	1	..	..	..	1	..	1	..	..	..	..	..	..	..	2	1	..	..	..	..	..	..	3	7
Newmarket	Males	4	3	..	1	..	3	1	2	4	8	2	1	..	..	4	..	4	2	5	3	4	2	3	1	1	..	..	29	...
	Females	6	3	..	2	1	2	4	..	2	4	5	..	..	..	1	1	1	3	3	1	4	4	1	2	3	5	..	29	58
Newton	Males	2	..	..	..	..	..	..	..	1	2	..	..	..	..	3	..	..	..	..	..	1	1	..	..	..	..	..	5	...
	Females	2	1	..	..	..	..	..	1	1	2	1	..	..	..	1	..	1	1	..	..	..	2	1	..	1	1	..	8	13
North Hampton	Males	1	..	..	..	..	..	1	..	1	2	1	..	..	..	..	1	1	1	..	..	..	..	2	1	..	..	..	6	...
	Females	...	1	..	..	..	..	..	..	1	1	1	..	..	..	1	..	2	..	..	..	1	..	..	..	..	..	..	4	10
Northwood	Males	1	..	..	..	1	2	..	..	2	2	1	..	..	..	2	1	2	1	..	..	..	..	..	..	2	1	..	9	...
	Females	1	..	..	..	1	2	1	..	2	3	2	..	..	..	1	1	..	1	..	..	1	3	2	1	1	1	..	12	21
Nottingham	Males	...	..	..	.	1	1	1	1	1	2	..	..	..	1	..	..	1	..	1	..	2	2	1	1	..	..	..	8	...
	Females	2	..	..	1	..	..	..	..	1	3	1	..	..	..	..	1	2	1	..	..	1	..	..	2	1	..	..	8	16
Plaistow	Males	1	1	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	2	1	..	..	..	..	..	1	..	4	...
	Females	1	..	1	..	1	1	1	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	1	..	1	1	..	5	9

Portsmouth	Males	18	7	3	5	4	7	10	6	13	14	9	..	..	2	2	7	11	11	12	6	7	15	6	7	10	4	..	98	...
	Females	14	11	2	3	5	4	4	9	11	17	10	..	..	..	10	8	5	7	6	6	6	10	8	3	9	12	..	90	188
Raymond	Males	1	1	..	1	..	..	..	2	..	2	..	..	..	..	..	..	1	..	1	1	..	..	1	1	2	..	..	7	...
	Females	...	1	..	..	1	1	..	2	4	2	..	..	..	..	1	2	2	2	..	..	1	1	1	1	..	..	..	11	18
Rye	Males	..	..	1	..	..	..	..	..	1	3	..	..	..	..	..	..	..	..	..	1	..	1	..	..	1	2	..	5	...
	Females	..	..	..	..	1	..	..	4	2	2	..	2	..	..	..	1	..	1	1	1	..	1	..	2	2	2	..	11	16
Salem	Males	4	..	..	..	..	..	..	..	3	2	1	..	..	..	..	..	..	1	..	..	1	4	..	1	..	3	..	10	...
	Females	1	..	1	..	..	1	..	1	1	1	2	..	1	..	..	1	1	1	..	1	1	1	..	2	..	1	..	9	19
Sandown	Males	..	..	..	..	..	..	..	..	..	2	1	..	..	..	..	..	1	..	..	..	..	..	..	..	1	1	..	3	...
	Females	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	2	5
Seabrook	Males	2	3	..	..	..	1	1	1	2	1	..	..	..	..	1	1	1	1	..	..	..	2	1	1	2	1	..	11	...
	Females	2	..	..	1	1	..	1	..	2	3	2	..	..	..	1	1	1	..	2	..	1	3	1	..	2	..	..	12	23
South Hampton	Males	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	2	...
	Females	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	2	4
South Newmarket	Males	1	1	..	..	..	..	1	..	1	1	1	..	..	..	..	2	1	..	..	1	1	..	1	..	..	..	..	6	...
	Females	1	..	..	..	..	1	..	1	2	..	..	..	..	..	..	..	1	1	1	..	..	1	..	..	..	1	..	5	11
Stratham	Males	1	..	..	1	..	2	..	1	..	..	1	..	..	..	1	..	..	1	..	..	1	1	..	1	..	1	..	6	..
	Females	..	..	..	..	..	1	..	..	2	1	..	..	..	..	1	1	..	..	..	..	..	..	..	..	1	1	..	4	10
Windham	Males	..	..	..	..	..	2	..	..	1	2	..	..	..	..	1	..	..	..	2	..	..	..	..	..	2	..	..	5	...
	Females	..	..	..	..	1	..	1	..	2	..	3	1	..	..	..	..	2	..	..	..	1	1	2	1	1	..	..	8	13

TABLE NO. XV. — *Continued.*

TOWNS IN STRAFFORD COUNTY.		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
Barrington	Males	1	..	1	..	..	..	..	..	..	1	2	..	..	..	..	1	3	..	..	1	..	..	..	..	..	..	..	5	...
	Females	3	2	..	..	..	..	1	..	3	5	2	1	..	..	..	..	4	1	2	2	1	1	2	..	3	1	..	17	22
Dover	Males	28	28	7	5	4	8	7	6	7	10	9	2	..	1	4	3	10	17	6	7	11	22	11	15	6	10	..	122	...
	Females	15	21	10	7	16	8	13	10	6	12	6	3	..	1	3	1	10	10	9	6	17	17	20	16	7	12	..	128	...
	Not stated	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	251
Durham	Males	1	..	..	..	3	1	..	1	..	2	1	..	..	..	..	1	1	1	1	1	1	..	..	2	1	..	..	9	...
	Females	..	..	1	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..	3	12
Farmington	Males	2	1	..	1	2	3	..	4	2	6	2	..	..	..	4	2	2	3	..	..	..	2	..	4	4	2	..	23	...
	Females	4	..	..	3	4	2	3	1	4	2	5	..	..	..	3	2	3	1	3	2	4	1	3	1	2	3	..	28	51
Lee	Males	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	2	...
	Females	..	..	..	..	1	1	..	1	1	..	..	..	..	..	2	..	..	..	..	..	..	..	1	..	1	..	..	4	6
Madbury	Males	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	...
	Females	..	..	..	..	..	..	1	..	1	1	..	..	..	..	1	1	..	..	..	..	..	..	1	..	..	..	..	3	4
Middleton	Males	..	..	..	1	..	1	..	1	1	2	..	..	..	..	1	..	..	2	..	..	..	1	..	..	..	2	..	6	...
	Females	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	1	1	..	3	9

Milton	Males	...	1	..	..	..	..	1	1	1	1	1	1	....	....	....	1	..	1	..	2	....	..	3	..	7	...
	Females	...	....	..	..	..	2	..	..	4	2	1	....	....	....	1	..	..	1	1	1	2	..	2	1	..	9	16
New Durham	Males	1	..	..	..	..	1	1	..	2	4	1	....	....	3	....	1	..	1	1	..	1	..	2	1	..	10	...
	Females	...	....	..	1	2	....	..	1	2	..	2	....	....	....	1	1	..	..	3	1	1	..	1	....	..	8	18
Rochester	Males	5	7	..	3	..	6	3	5	4	8	10	....	1	4	4	7	4	5	2	6	5	5	6	2	2	..	52	...
	Females	6	7	2	2	3	6	3	3	6	4	5	..	1	1	8	1	5	3	6	3	3	2	5	6	3	4	..	49	101
Rollinsford	Males	5	1	1	1	....	..	1	3	1	1	....	..	....	2	2	..	1	1	..	1	2	1	1	1	2	..	14	...
	Females	4	2	2	..	2	..	..	1	1	1	....	....	....	....	....	..	..	3	..	2	1	1	4	1	1	..	13	27
Somersworth	Males	17	4	3	5	3	3	2	6	7	1	2	....	....	7	4	5	5	3	..	4	4	5	7	2	7	..	53	...
	Females	25	10	5	4	7	7	5	8	2	5	2	1	....	10	7	2	5	7	7	8	10	7	11	3	4	..	81	134
Strafford	Males	...	1	..	..	..	..	..	..	1	5	5	....	....	1	....	..	1	1	1	1	1	1	2	..	3	..	12	...
	Females	...	2	..	1	1	1	....	..	4	1	2	1	....	1	1	..	2	1	1	2	..	1	2	1	1	..	13	25

TABLE NO. XV. — *Continued.*

TOWNS IN BELKNAP COUNTY.		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
Alton	Males	1	2	..	2	2	1	3	1	3	4	3	..	..	..	..	2	1	4	1	2	3	3	1	3	..	2	..	22	...
	Females	1	..	1	1	1	1	2	1	2	3	2	..	..	..	1	2	1	1	1	..	2	..	2	2	1	2	..	15	37
Barnstead	Males	..	..	..	..	..	..	2	..	..	5	5	..	..	..	1	..	1	2	..	1	..	1	2	1	2	1	..	12	...
	Females	..	1	..	..	1	3	1	1	1	5	1	1	..	1	2	1	4	..	3	..	1	2	1	..	..	1	1	16	28
Belmont	Males	2	..	..	1	1	..	1	..	..	1	3	..	..	..	..	..	1	..	1	..	..	1	2	1	2	1	..	9	...
	Females	1	2	..	..	1	..	2	2	1	1	2	..	..	..	2	1	1	2	1	..	1	..	1	1	..	2	..	12	21
Center Harbor	Males	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
	Females	..	..	..	..	..	..	..	1	..	..	2	..	..	..	..	1	..	..	..	..	..	1	1	..	..	..	..	3	3
Gilford	Males	4	1	2	1	1	..	3	5	1	2	1	1	..	1	1	2	2	1	4	5	1	2	2	..	1	2	..	23	...
	Females	4	1	..	3	1	1	..	4	4	6	2	1	..	..	2	..	3	3	2	2	3	2	2	3	2	3	..	27	50
Gilmanton	Males	..	..	..	1	1	..	..	2	1	1	2	2	..	..	1	1	..	4	..	..	..	2	..	..	2	..	..	10	...
	Females	..	..	..	1	1	..	..	..	1	4	1	2	..	..	..	..	2	2	2	1	1	..	1	..	..	1	..	10	20
Laconia	Males	12	7	..	4	4	6	6	2	3	10	3	..	..	..	5	3	5	2	2	4	7	13	2	4	6	4	..	57	...
	Females	13	3	1	7	2	1	5	1	4	5	8	2	..	1	7	4	2	2	4	4	7	3	11	2	4	3	..	53	110

Meredith	Males	3	1	..	..	..	1	1	..	4	5	3	..	..	1	1	2	2	1	1	1	3	1	1	1	3	2	..	19	...
	Females	1	..	..	..	1	2	..	1	3	3	2	1	..	..	..	..	..	2	3	..	1	3	1	2	1	1	..	14	33
New Hampton	Males	1	..	..	..	..	..	..	2	5	2	1	..	..	..	..	1	4	1	..	..	1	..	2	..	1	1	..	11	...
	Females	...	..	..	..	..	1	..	1	2	1	3	..	..	..	1	..	1	..	2	..	..	..	1	..	2	1	..	8	19
Sanbornton	Males	3	..	..	..	..	..	..	..	3	6	1	..	..	..	..	1	2	1	2	..	2	..	..	1	4	..	..	13	...
	Females	...	..	1	..	..	..	1	..	3	4	2	..	..	..	2	1	1	2	..	1	..	..	1	2	1	..	..	11	24
Tilton	Males	4	1	..	1	1	..	2	1	3	1	3	..	..	..	1	..	1	..	3	2	4	1	2	..	2	1	..	17	...
	Females	1	..	..	..	2	2	..	..	5	1	2	..	..	..	..	2	..	1	2	1	2	1	..	2	1	1	..	13	30

TABLE NO. XV. — *Continued.*

TOWNS IN CARROLL COUNTY.		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
Albany	Males	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	2	...
	Females	...	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	3
Bartlett	Males	1	1	..	..	1	..	..	1	1	1	..	..	..	..	1	..	1	..	..	..	..	2	..	1	1	..	..	6	...
	Females	3	1	..	..	1	..	..	..	2	1	2	..	..	..	..	1	2	1	..	..	..	1	2	2	1	..	..	10	...
	Not stated	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	17
Brookfield	Males	...	2	..	3	1	2	..	1	..	..	..	..	..	..	..	1	2	..	..	..	1	..	1	..	1	3	..	9	...
	Females	...	..	..	..	..	..	..	..	1	1	1	1	..	..	1	..	2	..	..	..	..	..	..	1	..	..	..	4	13
Chatham	Males	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
	Females	...	..	..	..	..	..	1	..	..	1	..	1	..	..	1	..	1	..	..	..	..	..	1	..	..	..	..	3	3
Conway	Males	3	..	1	1	1	2	2	4	..	5	3	..	..	..	..	..	2	4	3	2	1	5	2	2	1	..	..	22	...
	Females	3	1	..	..	1	2	2	2	3	3	2	..	..	..	..	2	..	3	2	5	2	2	3	..	..	..	..	19	41
Eaton	Males	...	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	2	...
	Females	...	..	..	..	..	..	..	..	..	1	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	2	4
Effingham	Males	1	..	1	..	..	..	1	2	1	4	1	..	..	..	..	..	..	1	2	1	..	1	1	1	4	..	..	11	...
	Females	...	..	..	..	..	..	1	..	3	2	..	..	..	..	..	1	1	1	..	..	..	..	..	3	..	..	..	6	17
Freedom	Males	...	..	..	..	..	..	1	1	..	..	1	..	..	..	..	1	..	..	..	..	1	1	..	..	..	..	..	3	...
	Females	...	..	..	1	..	..	..	..	1	2	..	..	..	..	..	..	..	1	1	..	..	2	..	..	..	..	..	4	7

Hart's Location....	Males																																		
	Females																																		
Jackson	Males													3	1				2			1	1											4	
	Females						1							1							1							1					2	6
Madison	Males							1		1											1								1				2	
	Females		1			1					2		1					1				1					1	2				5	7
Moultonborough	Males	1	1		1						1		1							2	2				1								5	
	Females	2			1		1			1	4	2					1	2	2	1	2				1		1		1			11	16
Ossipee	Males	3	1	1				2	2		1	3				1	1	1	1	1	1		1	3		3	1	1				14	
	Females	3	1			1			1		2	5					1	2	1					3	1	1	2	2				13	27
Sandwich	Males					1	2	1	2	5	3	3	1				1	1	2	2	2	1	2	1		3	1	2				18	
	Females	1					1	1		1	3	3	1					1	1		1			2	3		2	1				11	29
Tamworth	Males									1	2	1	1	1			1					1	1	2				1				6	
	Females	1				1		2	1	1	3	2					1			3	1	1	1	1		1	1	1				11	17
Tuftonborough	Males	1	1			1	1		2	3	1	1						1	1		1	2	3			1	2					11	
	Females	2			1		2		1	6									4	2	1	1	1	1	1				1			12	23
Wakefield	Males	1	1			1				3	3	1								1	1		1	1	2	2	1	1				10	
	Females				2	2	1			3		3					1	2	1	1	1			2		2	1					11	21
Wolfeborough	Males	1	1			1	3	3	1	8	2	1				1			3	2	5	2		2		3	3	2				22	
	Females				4	2	2	4		2	1	5							3	5	1	3	3	2		1		2				20	42

TABLE NO. XV. — *Continued.*

TOWNS IN MERRIMACK COUNTY.		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
Allenstown	Males	...	2	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	1	..	..	1	..	1	..	4	...
	Females	1	..	1	..	..	..	..	1	1	1	..	..	..	1	..	1	..	1	..	..	1	..	1	..	..	2	..	6	10
Andover	Males	1	2	2	..	..	..	..	1	2	3	2	..	..	1	3	2	..	1	2	1	1	2	..	2	..	..	..	14	...
	Females	..	..	1	1	..	1	..	..	..	1	2	..	..	..	1	2	..	..	1	..	1	..	1	..	..	..	..	6	20
Boscawen	Males	2	2	1	..	1	2	1	1	1	8	2	..	..	..	1	1	4	..	..	2	4	5	2	..	1	1	..	21	...
	Females	1	2	..	..	1	3	2	3	5	3	7	..	..	..	1	2	2	2	2	..	5	3	1	4	2	3	..	27	48
Bow	Males	..	..	..	..	..	..	1	..	1	1	1	..	..	..	..	..	2	..	..	..	..	..	..	1	..	1	..	4	...
	Females	...	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	1	..	..	1	..	..	..	..	3	...
	Not stated	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	8
Bradford	Males	1	1	..	2	..	..	..	..	2	1	3	..	..	..	1	..	2	2	..	2	..	2	..	..	..	1	..	10	...
	Females	2	1	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	2	1	1	..	..	..	..	5	15
Canterbury	Males	...	1	..	..	..	1	..	..	..	2	3	..	..	..	..	..	1	..	2	..	1	1	1	..	1	..	..	7	...
	Females	1	..	..	..	1	..	1	1	1	..	3	1	..	..	..	2	1	2	..	1	..	1	1	1	..	..	..	9	16
Chichester	Males	...	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	2	...
	Females	...	..	..	..	1	1	..	1	1	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	..	1	..	4	6

Concord	Males	25	6	4	7	14	12	11	18	21	24	9	..	..	..	14	14	14	16	11	17	15	16	9	9	8	8	..	151	...
	Females	15	13	..	6	14	16	15	14	27	31	9	4	..	1	16	10	21	15	9	15	9	22	9	15	10	14	..	165	316
Danbury	Males	..	..	..	1	..	1	..	1	3	..	1	2	..	..	..	1	1	..	3	2	..	1	..	..	1	..	..	9	...
	Females	1	..	..	1	..	1	2	..	..	1	2	..	..	..	..	1	..	..	4	..	..	1	2	..	..	..	..	8	17
Dunbarton	Males	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	2	...
	Females	..	..	..	..	..	..	..	..	1	1	2	..	..	..	..	..	..	..	..	1	1	..	..	1	1	..	..	4	...
	Not stated	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	7
Epsom	Males	..	..	..	..	1	..	1	1	1	1	1	..	..	..	1	..	1	1	1	..	..	..	..	..	..	2	..	6	...
	Females	..	..	..	..	1	..	..	1	..	2	1	..	..	..	1	..	1	..	2	1	..	..	..	..	..	..	..	5	11
Franklin	Males	7	2	..	..	..	2	3	4	4	6	1	..	..	..	1	2	1	3	1	1	1	3	4	5	3	4	..	29	...
	Females	4	1	1	2	1	3	2	1	4	2	2	..	..	..	3	2	3	2	2	..	1	5	..	..	2	3	..	23	52
Henniker	Males	..	..	1	1	..	1	1	1	5	3	4	..	..	..	1	2	1	2	1	2	..	2	2	2	..	2	..	17	...
	Females	..	..	..	..	..	1	1	..	3	1	2	..	..	..	..	2	..	..	..	1	..	1	1	2	1	..	..	8	25
Hill	Males	..	..	..	..	..	..	..	..	2	1	1	..	..	..	1	..	1	..	1	..	1	..	..	..	..	..	..	4	...
	Females	..	1	..	..	..	..	1	1	1	1	1	1	..	..	1	1	1	1	1	..	..	1	1	..	..	..	..	7	11
Hooksett	Males	4	1	..	1	..	..	..	1	1	1	1	..	..	..	1	1	1	..	..	2	1	..	..	1	1	2	..	10	...
	Females	6	1	1	..	4	1	1	..	2	3	..	..	..	..	2	1	4	1	2	..	2	2	3	1	1	..	..	19	29
Hopkinton	Males	..	..	1	..	1	1	1	1	5	5	4	..	..	..	2	2	..	2	1	..	..	3	2	3	1	3	..	19	...
	Females	..	..	..	..	1	3	..	2	1	4	6	1	..	..	3	..	2	1	3	2	1	1	1	2	..	2	..	18	37
Loudon	Males	..	..	..	..	..	2	1	..	..	4	1	..	..	1	..	2	1	1	..	1	1	..	1	..	1	1	..	9	...
	Females	..	1	..	1	..	2	1	3	..	2	2	..	..	..	1	3	1	..	..	2	1	2	..	2	..	..	..	12	21

TABLE NO. XV. — *Continued.*

TOWNS IN MERRIMACK COUNTY. — *Continued.*		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
Newbury	Males	1	1	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	1	..	..	..	..	2	..	1	..	..	4	...
	Females	...	..	..	1	..	1	..	..	..	..	2	..	..	..	..	..	1	..	2	..	..	..	..	..	1	..	..	4	8
New London	Males	...	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	2	...
	Females	...	..	..	..	..	1	1	..	1	1	..	1	..	..	..	1	1	..	2	..	..	..	..	..	..	1	..	5	7
Northfield	Males	3	..	..	..	..	1	..	1	..	1	2	1	..	1	..	1	..	..	..	2	..	..	2	2	2	..	1	10	...
	Females	1	..	..	..	..	..	1	..	3	1	..	1	..	..	1	..	..	2	..	1	..	..	..	1	..	2	..	7	17
Pembroke	Males	3	1	..	..	..	2	2	1	..	..	..	..	..	..	..	1	..	1	..	2	1	1	..	2	1	..	..	9	...
	Females	4	1	..	3	..	2	..	3	1	..	2	..	..	..	1	2	4	..	..	2	2	1	2	..	..	2	..	16	25
Pittsfield	Males	9	2	..	..	1	..	..	2	5	3	1	..	..	..	1	3	1	1	2	2	4	5	..	1	..	3	..	23	...
	Females	...	2	1	..	1	1	1	2	4	4	6	1	..	4	1	5	..	4	4	3	2	4	1	..	..	3	..	27	...
	Not stated	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	1	..	..	2	52
Salisbury	Males	...	..	..	..	..	..	1	2	..	2	1	..	..	..	..	1	..	..	1	..	..	1	2	1	..	..	..	6	...
	Females	1	1	..	1	..	..	..	..	2	2	1	1	..	..	1	1	2	..	..	..	..	1	1	1	1	1	..	9	15
Sutton	Males	...	2	..	..	..	..	..	1	..	..	..	1	..	..	..	..	1	..	1	1	..	..	..	..	..	1	..	4	...
	Females	...	..	..	..	..	2	2	1	2	4	1	..	..	..	1	1	2	1	..	..	2	3	1	..	1	..	..	12	16

Warner	Males	1	..	..	..	..	..	2	2	3	2	4	..	..	..	1	1	1	1	..	2	1	3	1	..	2	1	..	14	...
	Females	2	2	..	..	1	..	2	..	1	3	1	..	..	..	..	2	3	..	..	1	1	2	1	2	..	..	..	12	26
Webster	Males	1	..	..	..	1	1	..	..	1	1	2	..	..	..	1	..	1	1	1	..	..	1	..	2	..	..	..	7	...
	Females	...	..	..	..	1	..	1	3	..	1	3	..	..	..	1	1	..	1	2	..	..	2	1	..	..	1	..	9	16
Wilmot	Males	...	1	..	..	..	1	..	2	..	1	1	..	..	..	..	2	..	..	2	..	..	1	..	..	..	1	..	6	...
	Females	2	..	..	..	..	1	1	1	1	2	1	..	..	..	..	2	2	..	..	..	1	..	1	3	..	..	..	9	15

TABLE NO. XV. — *Continued.*

TOWNS IN HILLSBOROUGH COUNTY.		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
Amherst	Males	1	..	..	..	..	1	..	1	2	4	4	..	..	..	1	2	3	2	2	..	2	..	..	1	..	..	..	13	...
	Females	...	..	..	..	..	1	..	1	4	..	2	..	..	..	1	..	1	1	..	..	..	..	2	2	1	..	..	8	21
Antrim	Males	...	..	..	..	..	..	..	..	2	3	2	..	..	..	1	..	..	1	..	..	2	1	1	1	..	..	..	7	...
	Females	...	..	..	..	1	..	..	..	1	2	..	..	..	..	..	2	..	..	1	..	..	..	1	..	..	..	..	4	11
Bedford	Males	...	2	..	1	..	..	1	..	2	1	..	..	..	..	2	..	..	1	..	..	..	1	1	1	1	..	..	7	...
	Females	...	..	2	..	..	..	2	1	..	2	2	..	..	..	1	..	1	2	..	1	..	1	..	1	2	..	..	9	16
Bennington	Males	1	..	1	1	..	1	1	1	1	..	1	..	..	..	..	..	1	1	1	..	1	1	1	2	..	..	..	8	...
	Females	1	..	..	..	..	1	..	..	1	..	2	..	..	..	1	..	..	..	..	..	..	1	1	2		..	..	5	13
Brookline	Males	3	..	..	..	..	..	1	..	..	1	1	..	..	..	..	..	..	2	..	1	..	..	..	1	1	1	..	6	...
	Females	3	..	..	..	..	1	..	1	1	2	2	..	..	..	1	1	2	1	..	..	2	1	..	1	1	..	..	10	16
Deering	Males	1	..	..	..	..	1	2	1	..	..	1	..	..	..	..	2	..	1	..	..	..	..	..	..	1	2	..	6	...
	Females	...	..	..	..	2	..	..	..	1	1	1	..	..	..	1	1	..	1	..	..	..	..	..	1	..	1	..	5	11
Francestown	Males	...	1	..	..	..	..	..	..	..	2	4	2	..	..	1	1	2	1	2	..	1	..	..	1	..	..	..	9	...
	Females	...	1	..	3	..	2	1	1	1	..	3	1	..	..	..	1	1	3	1	3	..	2	..	1	1	..	..	13	22

Goffstown	Males	1	1	1	..	..	..	..	2	1	4	3	..	..	..	2	1	2	1	3	1	..	1	..	1	1	..	..	13	...
	Females	2	1	..	..	1	3	1	..	2	2	4	1	..	..	1	3	..	..	..	2	2	3	2	1	2	1	..	17	...
	Not stated	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	31
Greenfield	Males	1	..	..	..	2	1	..	..	2	3	..	..	..	..	2	1	..	3	1	..	..	1	..	1	..	..	..	9	...
	Females	...	..	..	..	1	..	2	1	1	1	1	..	..	..	..	1	..	1	1	..	1	1	1	..	1	..	..	7	16
Greenville	Males	5	1	1	..	2	..	1	2	2	3	..	..	..	..	3	2	..	1	..	1	1	2	4	1	1	1	..	17	...
	Females	3	2	1	1	2	..	..	1	..	..	1	..	..	..	2	..	1	..	..	1	..	1	2	..	2	2	..	11	28
Hancock	Males	1	..	..	..	1	..	..	..	1	2	2	..	..	..	2	..	..	..	1	..	..	..	..	3	..	1	..	7	...
	Females	...	..	..	1	..	..	..	1	1	..	1	..	..	..	..	..	1	1	..	1	..	..	..	..	..	1	..	4	11
Hillsborough	Males	3	2	..	..	..	..	..	2	2	2	1	1	..	..	1	..	2	2	2	1	..	..	2	1	2	..	..	13	...
	Females	...	..	..	..	2	..	..	..	1	1	2	..	..	1	..	..	2	..	2	..	1	1	..	..	1	..	..	7	20
Hollis	Males	1	..	..	..	..	..	..	..	1	1	1	..	..	..	..	..	..	..	..	1	..	1	..	..	1	1	..	4	...
	Females	...	1	..	..	..	1	..	..	1	3	1	..	..	..	..	1	..	..	..	1	1	2	..	1	..	1	..	7	11
Hudson	Males	1	..	..	..	1	..	..	..	2	3	1	..	..	..	..	..	1	..	..	2	1	1	1	1	1	..	..	8	...
	Females	1	2	..	..	..	..	1	1	1	2	1	1	..	..	1	2	..	2	..	1	..	3	..	..	1	..	..	10	18
Litchfield	Males	...	..	..	..	..	..	..	..	..	1	1	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	2	...
	Females	...	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	3
Lyndeborough	Males	...	1	..	..	2	..	..	1	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	3	1	1	..	6	...
	Females	1	1	..	1	..	..	..	1	..	..	1	..	..	..	1	..	1	..	1	..	1	..	..	..	1	..	..	5	11
Manchester	Males	103	65	17	17	26	19	17	32	29	20	16	..	..	1	31	32	22	25	21	39	43	26	36	29	29	29	..	362	...
	Females	108	50	16	36	37	23	30	29	29	28	12	2	..	2	27	30	34	28	19	51	46	32	40	33	29	33	..	402	...
	Not stated	...	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	2	766

TABLE NO. XV. — *Continued.*

TOWNS IN HILLSBOROUGH COUNTY. — *Continued.*		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
Mason	Males		2			1				1	4					1	1	1		1	2			1			1		8	
	Females	1				1										1											1		2	10
Merrimack	Males		1						2		3	1				1	1	1	1			1		1			1		7	
	Females						1	1	1	3	2	2	2			2	1	1	1			1	2			2	2		12	19
Milford	Males	5	1			1		1	1	1	6	7					4	2	2	3	1	3	1	1	5		1		23	
	Females	2	5		2	2	1	1	3	4	1	4				2	1	1	3	1	4	2	2	3	2	4			25	48
Mont Vernon	Males					1					1										1		1						2	
	Females			1														1											1	3
Nashua	Males	64	17	8	7	8	6	4	13	10	11	11			1	11	11	15	9	12	19	23	15	19	8	7	11		160	
	Females	41	17	5	7	14	11	8	10	14	23	7			1	17	12	10	18	6	18	21	13	14	10	12	7		158	318
New Boston	Males		2		2	2				2	2	2				1	1	1	1	1	1		1	1		1	3		12	
	Females		1				2	1		1	3						1		2			2				1	2		8	20
New Ipswich	Males	1								2	4							3	1				1	2					7	
	Females	2	1				2	1		2	2	2				1	1	1		2	2	2			1	2			12	19
Pelham	Males	1			1					2		1				1			1	1					2				5	
	Females	1			1			1	1			2				1						1	1	1	1		1		6	11

Peterborough	Males	2	2	3	2	3	..	3	..	3	2	4	1	..	..	3	3	1	3	2	7	1	1	1	1	..	2	..	25	...
	Females	3	3	2	2	..	1	2	2	5	2	1	..	..	..	4	1	..	1	2	4	2	1	6	..	2	..	..	23	48
Sharon	Males	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Females	...	...	...	...	1	..	...	...	...	...	1	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	2	2
Temple	Males	...	...	...	...	...	...	...	...	...	...	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	...
	Females	...	1	..	..	..	..	...	...	...	...	..	1	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	2	3
Weare	Males	...	...	...	..	1	..	1	..	..	5	4	1	..	..	3	2	2	1	..	1	..	2	1	..	..	..	..	12	...
	Females	2	1	..	1	2	1	1	..	4	4	..	2	..	..	2	2	2	1	2	2	2	1	1	..	1	2	..	18	30
Wilton	Males	7	2	..	1	2	4	2	5	5	5	6	..	..	..	4	1	5	2	2	5	..	4	4	3	4	5	..	39	...
	Females	2	3	1	1	1	..	1	6	2	3	3	1	..	2	3	6	..	4	2	2	1	..	1	3	2	2	..	26	65
Windsor	Males	...	...	...	...	...	...	...	...	..	1	..	..	..	..	...	...	...	...	...	1	..	..	..	..	..	..	..	1	...
	Females	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1

TABLE NO. XV. — *Continued.*

TOWNS IN CHESHIRE COUNTY.		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
Alstead	Males	3	..	..	1	..	..	..	1	..	2	2	..	..	..	2	..	..	..	1	..	..	2	1	..	..	2	1	9	...
	Females	1	..	..	..	..	..	1	1	..	2	1	..	..	1	2	..	..	..	..	1	3	..	1	..	..	..	..	7	16
Chesterfield	Males	1	..	..	..	1	1	..	1	1	3	..	..	..	..	1	2	..	..	..	..	1	2	1	..	..	1	..	8	...
	Females	..	..	1	..	2	1	1	2	1	1	1	..	..	..	1	1	1	..	..	1	1	..	1	..	3	1	..	10	18
Dublin	Males	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	...
	Females	..	..	..	..	1	1	1	2	1	2	2	..	..	..	..	1	..	2	1	1	..	2	1	1	1	..	..	10	11
Fitzwilliam	Males	1	1	..	1	..	..	2	1	..	2	1	1	..	..	..	2	..	2	..	..	..	3	..	2	..	1	..	10	...
	Females	2	2	..	1	..	..	..	..	3	1	3	..	..	..	4	..	1	..	2	..	1	2	1	1	..	..	..	12	22
Gilsum	Males	..	..	..	..	..	2	..	1	1	1	..	..	..	..	1	..	1	..	..	..	..	..	1	1	1	..	..	5	...
	Females	..	1	..	..	..	..	1	1	..	1	..	..	..	..	1	..	..	1	..	1	..	..	1	..	..	..	..	4	9
Harrisville	Males	..	..	..	1	1	1	..	..	..	..	2	..	..	..	..	..	1	..	1	..	..	2	..	..	1	..	..	5	...
	Females	1	..	..	..	1	..	1	..	..	1	..	..	..	..	..	1	2	..	..	..	..	..	1	..	..	..	..	4	9
Hinsdale	Males	2	2	..	2	1	1	..	..	2	..	..	..	..	..	1	..	1	1	1	..	1	1	1	1	..	2	..	10	...
	Females	3	2	1	4	4	1	1	..	2	..	1	..	..	..	1	1	..	1	1	3	2	2	2	5	1	..	..	19	29
Jaffrey	Males	2	..	..	1	..	1	1	2	3	..	..	..	..	..	2	..	..	1	..	1	1	..	2	2	..	1	..	10	...
	Females	3	..	..	..	1	1	..	1	..	2	2	1	..	..	1	1	..	..	..	..	..	3	2	2	1	1	..	11	21

Keene	Males	9	12	5	1	4	3	3	9	6	9	6	2	..	..	5	3	4	5	8	1	6	7	8	12	5	5	..	69	...
	Females	9	8	4	3	5	2	5	3	6	8	9	..	..	..	3	2	7	7	5	5	2	6	5	6	7	7	..	62	131
Marlborough	Males	4	..	..	1	..	1	..	..	1	1	1	..	..	2	1	1	..	1	..	1	..	2	2	1	1	1	..	11	...
	Females	2	..	..	2	1	..	..	2	..	3	2	..	..	..	1	..	1	2	2	1	1	1	2	..	..	1	..	12	23
Marlow	Males	...	1	1	..	1	..	..	..	1	2	..	..	..	..	..	1	..	1	..	..	..	1	..	..	2	1	..	6	...
	Females	1	..	..	..	1	1	1	..	..	2	2	..	..	..	1	..	..	1	..	1	1	..	1	2	1	..	..	8	14
Nelson	Males	...	..	..	..	2	..	..	..	..	..	3	..	..	..	..	..	1	..	1	..	..	..	..	1	..	2	..	5	...
	Females	...	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	2	7
Richmond	Males	...	..	1	..	..	..	..	1	3	2	1	..	..	..	1	1	..	1	..	..	2	1	2	..	..	..	..	8	...
	Females	1	..	..	..	1	..	..	1	1	1	..	..	..	..	..	3	..	..	1	..	..	1	..	..	..	..	..	5	13
Rindge	Males	...	2	..	..	1	..	1	1	3	..	1	..	..	..	..	3	2	2	1	..	..	..	..	1	..	..	..	9	...
	Females	2	2	1	1	1	1	1	..	..	2	2	3	..	..	2	..	1	1	2	2	..	1	..	1	1	5	..	16	25
Roxbury	Males	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	...
	Females	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	2
Stoddard	Males	...	..	..	..	1	..	..	..	2	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	1	..	..	3	...
	Females	...	..	..	..	..	1	2	..	2	1	1	..	..	..	..	..	..	..	..	1	2	1	..	..	1	2	..	7	10
Sullivan	Males	...	..	..	..	..	..	1	..	2	1	..	..	..	..	..	1	..	..	1	..	..	1	..	..	1	..	..	4	...
	Females	1	..	1	1	..	..	..	..	..	..	1	..	..	1	1	1	..	..	2	..	..	..	..	..	1	..	..	5	9
Surry	Males	...	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	2	...
	Females	...	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	2	4
Swanzey	Males	3	..	..	..	..	1	1	1	5	5	2	..	..	..	2	1	..	4	..	2	1	..	3	3	1	1	..	18	...
	Females	2	..	..	1	..	2	..	1	1	3	1	..	..	..	1	1	..	3	1	..	..	1	2	2	..	..	..	11	29

TABLE NO. XV. — *Continued.*

TOWNS IN CHESHIRE COUNTY. — *Continued.*		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
Troy	Males	1	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	2	...
	Females	...	3	..	..	..	2	1	..	1	..	..	..	..	1	1	1	2	..	..	..	1	..	..	1	..	2	..	8	10
Walpole	Males	4	2	..	3	1	4	..	2	..	..	2	..	..	..	..	..	2	3	3	2	2	2	..	1	2	1	..	18	...
	Females	3	..	..	..	..	1	..	3	1	3	2	..	..	..	..	3	3	3	1	1	..	1	..	..	..	1	..	13	31
Westmoreland	Males	1	..	..	2	..	1	..	1	3	4	4	1	..	..	..	..	1	2	1	1	1	..	1	5	2	2	1	17	...
	Females	...	..	1	2	2	..	..	2	4	2	1	1	..	..	..	2	1	1	1	1	..	1	1	2	1	4	..	15	...
	Not stated	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	33
Winchester	Males	4	1	..	..	1	2	..	1	1	..	1	..	..	..	2	..	2	..	..	..	2	..	2	2	1	..	..	11	...
	Females	4	..	..	1	3	..	2	..	3	4	2	1	..	2	1	2	..	..	4	1	3	4	4	1	..	2	..	22	...
	Not stated	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	2	35

TABLE NO. XV. — *Continued.*

TOWNS IN SULLIVAN COUNTY.		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
Acworth	Males	..	..	..	1	..	..	1	1	1	2	2	..	..	..	2	1	1	1	..	..	1	1	..	..	..	1	..	8	..
	Females	..	..	..	2	..	2	1	2	1	2	1	..	..	..	2	4	1	1	..	..	1	..	..	1	1	..	..	11	19
Charlestown	Males	1	..	..	1	..	..	1	..	5	4	2	..	..	..	..	..	..	5	1	..	1	1	2	..	1	3	..	14	..
	Females	..	..	..	1	2	2	1	1	..	3	1	1	..	..	..	1	..	2	2	1	1	2	1	..	..	2	..	12	26
Claremont	Males	13	4	..	1	1	1	2	3	6	4	6	1	..	1	4	4	2	3	4	2	6	5	1	4	6	2	..	43	..
	Females	5	2	2	1	6	4	3	5	5	7	7	1	..	..	6	3	3	1	5	3	1	6	3	7	5	5	..	48	91
Cornish	Males	..	1	..	..	1	..	..	1	3	2	1	..	..	..	..	2	..	1	..	..	..	1	3	1	..	1	..	9	..
	Females	..	..	..	1	..	1	2	..	3	1	..	2	..	..	1	1	1	..	1	..	..	1	..	2	2	1	..	10	19
Croydon	Males	1	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	1	1	1	..	..	..	..	..	..	..	..	3	..
	Females	..	..	..	..	..	1	..	1	..	2	2	..	..	..	..	..	1	2	..	..	..	..	..	..	1	2	..	6	9
Goshen	Males	..	..	..	..	..	..	1	..	..	1	1	..	..	..	..	..	..	..	..	1	1	..	..	1	..	..	..	3	..
	Females	..	..	..	..	..	..	..	..	1	3	1	1	..	..	1	..	1	..	..	..	..	..	..	2	..	2	..	6	9
Grantham	Males	..	..	..	..	1	..	..	..	1	1	..	..	..	..	..	..	..	1	1	..	..	..	1	..	..	..	..	3	..
	Females	1	..	..	1	..	..	..	..	1	..	..	1	..	1	..	..	..	..	1	2	..	..	..	..	..	1	1	5	8
Langdon	Males	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..
	Females	..	..	1	3	..	..	..	..	..	..	..	..	..	..	1	1	1	..	..	..	..	..	1	..	..	..	..	4	5

TABLE NO. XV. — *Continued.*

TOWNS IN SULLIVAN COUNTY. — *Continued.*		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
Lempster	Males	1	..	..	..	..	..	..	1	1	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1	..	..	..	3	...
	Females	...	..	..	1	..	1	1	1	3	4	..	..	..	..	..	2	..	2	2	..	..	2	1	2	..	..	..	11	14
Newport	Males	3	..	1	1	4	1	2	1	..	5	..	..	..	..	..	..	1	2	1	2	..	1	3	2	4	2	..	18	...
	Females	4	..	..	2	3	3	..	3	4	2	2	2	..	..	6	3	..	2	1	4	1	1	3	2	1	1	..	25	43
Plainfield	Males	...	..	..	..	..	1	1	1	3	1	1	..	..	..	..	..	..	1	1	2	..	1	1	1	..	1	..	8	...
	Females	...	..	..	..	..	..	..	2	1	2	..	..	..	..	1	..	..	1	..	1	..	..	1	..	..	1	..	5	13
Springfield	Males	...	..	..	..	..	..	..	..	1	1	3	..	..	..	1	..	1	..	1	..	..	1	..	..	..	1	..	5	...
	Females	1	..	..	..	..	..	..	1	1	3	2	..	..	..	..	..	1	2	..	..	1	..	1	..	2	1	..	8	13
Sunapee	Males	...	..	..	..	..	3	1	..	2	1	1	..	..	..	..	..	2	1	..	1	..	1	1	..	1	1	..	8	...
	Females	1	..	..	..	..	..	1	..	..	2	2	..	..	..	1	1	..	..	..	..	1	..	..	2	1	..	..	6	14
Unity	Males	2	..	..	..	1	..	..	..	1	3	2	..	..	..	1	..	..	1	3	..	..	..	1	2	..	1	..	9	...
	Females	1	1	..	..	..	..	..	1	4	..	2	..	..	..	1	..	..	1	2	1	1	..	..	2	..	1	..	9	18
Washington	Males	...	..	..	1	..	..	..	..	1	1	..	1	..	..	..	..	..	..	..	2	..	1	..	..	1	..	..	4	...
	Females	...	..	..	..	..	..	..	1	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	2	6

TABLE NO. XV. — *Continued.*

TOWNS IN GRAFTON COUNTY.		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
Alexandria	Males	..	..	..	..	1	..	..	1	1	2	1	..	..	..	..	1	2	1	1	..	..	..	..	..	..	1	..	6	...
	Females	1	..	..	..	..	1	..	2	..	..	..	..	..	..	..	..	1	1	..	..	1	1	..	..	..	..	..	4	10
Ashland	Males	1	..	..	..	1	..	..	..	2	2	2	..	..	1	1	1	1	..	1	..	1	..	..	1	1	2	..	9	...
	Females	1	..	..	..	..	1	2	..	1	1	..	..	..	..	1	..	..	..	..	2	1	..	1	..	..	1	..	6	15
Bath	Males	3	..	..	1	..	..	..	..	1	1	2	..	..	1	..	2	..	..	..	..	3	1	..	1	..	2	..	9	...
	Females	1	..	..	..	..	1	..	..	..	4	..	..	..	..	1	..	2	1	1	..	..	..	..	..	..	1	..	6	15
Benton	Males	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	2	...
	Females	..	..	..	..	..	..	1	..	1	1	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	1	..	3	5
Bethlehem	Males	..	1	1	..	..	1	3	1	..	2	1	..	..	..	..	1	..	2	1	1	1	1	3	..	..	..	..	10	...
	Females	..	2	..	1	2	..	..	..	..	..	3	..	..	..	1	4	..	..	..	..	..	..	2	..	1	..	..	8	18
Bridgewater	Males	1	..	..	1	1	2	..	..	..	..	..	..	..	..	1	1	..	..	..	..	1	..	1	1	..	..	..	5	...
	Females	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	6
Bristol	Males	1	1	..	1	3	..	1	1	4	1	..	..	..	..	1	2	3	1	1	1	..	1	..	1	1	1	..	13	...
	Females	3	1	1	1	4	2	1	..	1	..	4	2	..	..	1	..	6	..	3	2	1	3	..	1	2	1	..	29	33
Campton	Males	..	..	..	..	..	..	..	..	1	3	3	2	..	..	..	1	..	..	1	..	..	1	..	2	3	1	..	9	...
	Females	1	..	..	1	2	1	1	..	1	5	2	..	..	..	..	1	2	..	2	..	2	2	1	1	3	..	..	14	23

TABLE NO. XV. — *Continued.*

TOWNS IN GRAFTON COUNTY. — *Continued.*		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
Canaan	Males	1	1	1	1	..	2	1	1	3	1	..	..	..	..	1	3	..	1	..	1	1	..	3	..	1	1	..	12	...
	Females	...	1	2	..	2	3	1	1	..	1	1	1	..	1	..	1	2	3	2	..	..	1	..	..	2	3	..	14	26
Dorchester	Males	...	..	..	..	..	1	..	..	..	..	1	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	2	...
	Females	...	..	..	1	1	..	..	1	..	2	..	..	..	..	..	..	..	..	1	..	..	2	..	..	2	..	..	5	7
Easton	Males	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
	Females	...	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	2	2
Ellsworth	Males	2	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	1	..	..	..	3	...
	Females	...	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	2	5
Enfield	Males	1	..	..	..	..	..	1	1	1	2	1	..	..	1	..	1	2	2	..	1	1	1	..	..	..	..	..	8	...
	Females	1	..	..	..	..	1	1	3	2	5	6	..	..	..	1	..	3	4	1	2	1	2	1	2	..	2	..	19	27
Franconia	Males	...	..	..	..	..	..	..	..	1	3	1	..	..	..	..	1	2	..	..	..	..	..	..	1	1	..	..	5	...
	Females	...	..	..	..	..	..	1	..	2	1	2	..	..	..	..	1	3	1	1	..	..	..	..	..	..	..	..	6	11
Grafton	Males	1	..	..	..	..	..	1	2	2	1	2	..	..	..	..	1	..	3	1	1	1	..	2	..	..	..	..	9	...
	Females	...	..	..	..	..	1	..	1	..	1	3	..	1	..	..	1	..	..	1	2	..	..	1	..	1	1	..	7	16
Groton	Males	1	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	2	1	..	..	..	..	..	..	..	..	3	...
	Females	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	2	5

Hanover	Males	2	1	..	..	1	1	1	..	2	5	1	..	..	..	..	2	..	1	3	..	..	1	2	1	1	3	..	14	...
	Females	1	1	1	..	2	..	1	3	6	6	3	..	..	..	2	1	4	1	2	3	5	2	2	1	..	1	..	24	38
Haverhill	Males	1	1	..	2	1	3	3	1	6	2	..	..	..	1	2	3	..	4	2	1	3	..	1	3	..	2	..	21	...
	Females	3	1	..	..	1	2	2	2	2	3	1	1	..	..	1	1	1	1	1	..	3	..	2	6	1	1	..	18	39
Hebron	Males	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	2	...
	Females	..	..	..	..	..	..	1	1	..	..	3	..	..	..	..	1	..	..	..	1	..	1	..	2	..	..	..	5	7
Holderness	Males	1	..	..	..	..	..	..	1	1	2	1	..	..	..	2	..	1	..	1	1	..	..	..	..	..	1	..	6	...
	Females	1	..	..	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	3	9
Landaff	Males	..	..	..	..	..	..	1	..	1	2	1	..	..	..	..	..	..	3	..	..	..	..	..	1	1	..	..	5	...
	Females	..	..	..	..	..	..	..	..	..	2	2	..	..	..	1	..	..	1	1	..	..	..	..	1	..	..	..	4	9
Lebanon	Males	2	..	1	..	3	..	..	..	4	3	2	..	..	..	1	1	..	..	3	2	1	3	3	..	..	1	..	15	...
	Females	3	1	..	..	..	1	3	3	4	5	1	1	..	..	2	2	2	3	3	1	1	1	1	2	1	3	..	22	37
Lincoln	Males	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
	Females	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	1
Lisbon	Males	1	1	1	..	..	1	2	1	1	2	1	1	..	..	..	..	1	1	1	1	..	..	2	4	2	..	..	12	...
	Females	1	..	..	1	3	..	..	1	4	2	1	..	..	..	2	1	2	1	2	1	..	1	1	..	1	1	..	13	25
Littleton	Males	3	1	1	2	3	1	1	2	4	4	2	2	..	..	1	1	5	3	..	..	1	5	4	4	1	1	..	26	...
	Females	3	..	1	2	..	1	2	2	3	2	1	..	..	..	1	..	2	..	3	..	4	3	2	..	1	1	..	17	43
Livermore	Males	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
	Females	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Lyman	Males	..	..	..	1	..	..	..	..	..	2	2	1	..	..	2	..	1	..	..	..	..	2	..	..	..	..	..	5	...
	Females	1	..	..	2	1	..	..	2	..	1	2	..	..	..	..	..	1	3	3	..	..	..	1	1	..	..	..	9	14

TABLE NO. XV. — *Continued.*

TOWNS IN GRAFTON COUNTY. — *Continued.*		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
Lyme	Males	2	..	..	..	..	1	..	2	3	1	4	..	..	..	..	..	..	1	2	4	..	2	1	1	2	..	..	13	...
	Females	1	..	..	..	..	1	1	..	4	4	3	..	..	..	1	1	1	2	1	2	3	2	..	1	..	..	..	14	27
Monroe	Males	...	1	..	1	..	..	..	..	1	..	..	1	..	..	..	..	..	3	..	1	..	..	..	..	..	..	..	4	...
	Females	...	..	1	..	..	..	..	..	..	1	1	1	..	..	..	2	1	1	..	..	..	..	..	..	..	..	..	4	8
Orange	Males	...	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	...
	Females	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	2	3
Orford	Males	2	1	..	1	2	..	1	2	..	4	4	..	..	..	..	1	3	1	1	3	1	3	1	1	..	2	..	17	...
	Females	1	1	..	..	1	..	..	1	1	4	3	..	..	..	1	..	3	2	..	..	1	3	1	1	..	..	..	12	29
Piermont	Males	1	..	..	..	..	..	1	..	..	3	..	..	..	..	..	..	1	1	..	..	1	1	..	..	..	1	..	5	...
	Females	...	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	2	7
Plymouth	Males	...	1	..	1	..	..	2	..	1	3	4	..	..	..	1	1	..	3	2	1	2	..	1	1	..	..	..	12	...
	Females	1	..	..	1	2	..	..	..	3	2	..	..	..	..	2	2	..	..	1	..	1	..	1	1	..	1	..	9	21
Rumney	Males	...	..	1	1	1	2	..	..	2	1	2	..	..	1	1	..	1	2	1	..	..	..	3	2	..	..	1	11	...
	Females	...	..	..	1	..	2	1	1	1	2	1	1	..	..	..	1	1	1	1	1	..	..	..	3	2	..	..	10	21
Thornton	Males	...	..	..	..	..	..	..	..	1	..	2	..	..	..	1	..	..	..	1	..	..	..	1	..	..	..	..	3	...
	Females	1	..	..	..	1	1	2	1	1	1	..	..	..	..	2	1	..	..	1	1	1	1	..	..	1	..	..	8	11

Warren	Males	...	..	..	..	..	1	..	..	..	..	2	..	..	..	..	..	..	..	..	..	1	..	1	..	1	..	..	3	...
	Females	...	..	..	..	..	1	1	..	2	1	1	..	..	..	..	1	2	..	..	1	..	..	..	..	1	1	..	6	9
Waterville	Males	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
	Females	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Wentworth	Males	1	..	..	..	1	..	1	2	2	3	2	..	..	..	3	..	2	2	1	1	1	..	..	1	1	..	..	12	...
	Females	...	..	..	..	1	..	..	1	1	2	..	..	..	..	..	..	..	..	..	2	..	..	1	2	..	..	..	5	17
Woodstock	Males	1	..	..	..	..	..	..	1	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	1	..	3	...
	Females	...	..	..	..	1	1	..	2	1	1	..	..	..	..	..	1	1	..	1	..	..	1	1	1	..	..	..	6	9

TABLE NO. XV. — *Continued.*

TOWNS IN COÖS COUNTY.		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
Berlin	Males	11	6	2	4	6	3	1	1	1	1	1	..	..	..	..	2	..	2	3	3	1	4	6	9	4	3	..	37	...
	Females	14	6	..	2	9	..	1	..	..	1	..	..	..	1	2	..	2	..	3	4	6	5	6	2	1	3	..	34	71
Carroll	Males	2	..	..	1	3	1	1	..	..	..	1	..	..	1	1	..	..	..	..	2	..	1	2	1	..	3	..	10	...
	Females	..	..	..	..	2	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	1	1	..	..	..	..	..	3	13
Clarksville	Males	..	..	..	..	..	..	1	..	..	2	1	..	..	..	1	1	..	..	1	..	..	..	1	..	..	..	..	4	...
	Females	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	5
Colebrook	Males	2	..	..	1	2	2	..	..	..	2	..	..	..	..	1	..	..	..	..	..	1	3	..	1	2	1	..	9	...
	Females	1	..	..	..	2	2	1	2	..	2	2	2	..	1	1	..	..	2	1	1	4	2	1	1	2	..	..	15	24
Columbia	Males	..	1	..	..	..	..	..	..	..	2	2	..	..	..	..	..	2	1	..	..	..	..	1	..	..	1	..	5	...
	Females	..	..	..	1	..	..	..	1	..	1	1	..	..	..	1	..	2	..	..	..	..	..	..	..	..	1	..	4	9
Dalton	Males	1	1	..	1	1	..	..	..	1	..	..	..	..	..	..	1	1	..	..	..	1	1	..	..	..	1	..	5	...
	Females	2	..	..	1	..	..	..	..	2	..	..	..	..	..	1	..	..	..	..	..	..	2	1	..	..	1	..	5	10
Dummer	Males	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	1	...
	Females	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	2	...
	Not stated	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	4

Errol	Males					1						1										1				1		2	
	Females									1												1						1	3
Gorham	Males	2	1			1		1														2	1		2			5	
	Females		1							1								1				1						2	7
Jefferson	Males	1					2						1					1			1	1	1					4	
	Females	1	1	1						1	1	2							1		2			1	1	1	1	7	11
Lancaster	Males					1	3	1		2	2	1	1			1	1	1		1	1	1			3		2	11	
	Females	2	2			3	2		5	3	1				1	1	4	2	1	3	1		1	2	3	1		19	30
Milan	Males	1	1	2		1					2				1			1	1				1		1	3	1	8	
	Females				2			2		1	1								1				1	1	1	1	1	6	14
Millsfield	Males																												
	Females																												
Northumberland	Males			1		1		1	1	1	3						1	1	1		1		3		1			8	
	Females	4	1		1		1	1	3		2	1				1	3	2	2			2		2	1	1		14	22
Pittsburg	Males				1				1			1						1		1						1		3	
	Females		1					1	1		1							1						1		1	1	4	7
Randolph	Males	1																						1				1	
	Females														1							1						1	2
Shelburne	Males			2	2															1						2	1	4	
	Females														1				1									1	5

TABLE NO. XV. — *Continued.*

TOWNS IN COÖS COUNTY. — *Continued.*		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
Stark	Males	3	1	..	1	..	..	..	..	2	1	..	..	..	1	1	1	..	..	1	1	..	2	1	..	..	2	..	9	...
	Females	1	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	..	..	3	12
Stewartstown	Males	..	..	..	..	1	1	..	..	1	4	1	1	..	1	2	1	1	1	..	..	..	1	1	2	1	..	..	10	...
	Females	1	..	..	..	1	..	1	..	2	2	1	..	..	..	..	1	1	1	..	..	..	1	1	1	1	1	..	8	18
Stratford	Males	1	..	1	..	1	..	..	..	..	3	1	1	..	..	..	..	..	1	1	2	1	2	..	..	..	1	..	8	...
	Females	2	1	2	..	..	2	..	1	2	2	..	..	..	..	3	2	..	1	1	..	1	1	..	1	1	1	..	12	20
Whitefield	Males	5	3	1	1	4	2	1	2	2	4	..	..	..	..	3	2	1	2	1	1	1	2	3	3	3	3	..	25	...
	Females	9	1	..	1	..	..	1	..	1	3	1	..	..	..	1	1	3	..	1	2	..	1	4	2	2	..	..	17	42

TABLE

Deaths by Ages, Sex, and

COUNTIES.		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.
Rockingham...	Males	56	31	9	12	21	30	26	26	57	79	40
	Females ..	50	29	11	17	25	28	28	44	62	74	61
	Not stated.	...	...	...	...	...	...	...	...	...	...	...
Strafford.....	Males.....	61	43	12	16	12	23	14	25	28	41	36
	Females ..	57	44	20	20	36	28	26	26	34	33	26
	Not stated.	...	...	...	...	1	...	...	...	...	...	...
Belknap	Males.....	30	12	2	10	10	8	18	13	23	37	25
	Females ..	21	7	3	12	10	11	11	12	26	33	27
	Not stated.	...	...	...	...	...	...	...	...	...	...	...
Carroll	Males.....	13	8	3	5	8	11	11	18	24	22	19
	Females ..	15	4	...	9	10	9	11	6	24	26	27
	Not stated.	1	...	...	...	...	...	...	...	...	...	...
Merrimack....	Males.....	58	25	10	12	19	27	25	41	59	73	47
	Females ..	41	27	5	18	27	41	35	39	62	71	56
	Not stated.	3	...	...	...	...	...	...	...	...	...	...
Hillsborough..	Males.....	202	100	31	32	53	33	34	63	74	94	75
	Females ..	173	90	28	56	67	52	54	61	80	84	58
	Not stated.	1	2	...	...	...	...	...	...	...	...	...
Cheshire.....	Males.....	36	21	7	13	14	18	9	22	35	33	28
	Females ..	36	18	9	16	23	14	18	19	26	41	35
	Not stated.	2	...	...	1	...	...	...	...	...	...	...
Sullivan	Males.....	21	5	1	5	8	6	10	8	25	28	19
	Females ..	13	3	3	12	11	14	9	18	25	31	20
	Not stated.	...	...	...	...	...	...	...	...	...	...	...
Grafton.....	Males.....	29	10	6	14	19	16	21	20	46	59	43
	Females ..	27	9	6	11	24	21	22	31	44	61	47
	Not stated.	...	...	...	...	...	...	...	...	...	...	...
Coös.....	Males.....	30	14	9	12	23	14	7	5	10	26	10
	Females ..	37	14	3	8	18	8	8	14	15	17	9
	Not stated.	1	...	...	...	...	...	...	...	...	...	...
Total	Males.....	536	269	90	131	187	186	175	241	381	492	342
	Females ..	470	245	88	179	251	226	222	270	398	471	366
	Not stated.	8	2	...	1	1	...	...	...	...	...	...
Grand total.....		1,014	516	178	311	439	412	397	511	779	963	708

NO. XVI.

Months, by Counties. *

90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
7	..	5	25	25	36	34	41	24	33	48	28	32	41	32	..	399	.....
11	1	1	40	36	34	30	27	29	37	47	32	35	44	51	..	442	.....
.....			.....													.....	841
3	..	2	26	17	28	36	17	14	25	39	24	39	19	32	..	316	.....
6	1	2	28	13	26	23	31	22	41	35	44	41	26	29	..	359	.....
.....			...	1	...	...	...	...	...	...	...	...	...	...	..	1	676
3	..	2	10	12	19	16	14	15	21	24	14	11	23	14	..	193	.....
7	..	2	17	12	15	15	20	9	18	12	22	14	12	15	1	182	.....
.....			.....													.....	375
3	..	2	4	7	14	14	16	11	11	20	6	17	17	10	..	147	.....
4	...	..	6	13	18	19	11	11	7	17	11	14	9	9	..	145	.....
.....			.....							...	1	...	...	...	..	1	293
4	..	3	29	36	35	33	32	40	32	49	28	32	23	33	1	403	.....
11	..	6	35	42	51	35	36	32	32	54	31	36	20	35	..	439	.....
.....		1	.....				1	...	1	.....			2	...	..	4	846
6	..	2	71	67	65	62	55	85	79	61	77	66	51	60	..	799	.....
11	..	6	71	68	60	70	41	93	89	69	75	60	68	56	..	820	.....
.....			.....							1	2	...	...	...		3	1,622
4	..	2	19	16	16	25	18	9	18	24	24	33	18	20	2	242	.....
6	..	5	21	20	20	24	23	21	17	26	26	24	18	26	..	266	.....
.....			.....			1	...	1	...	...	...	1	...	...		3	511
2	..	1	8	8	8	17	13	10	9	15	13	12	13	13	..	139	.....
8	..	1	21	16	9	14	14	12	7	12	11	21	13	17	1	168	.....
.....			.....							...	...	...	...	...		.....	307
7	..	5	20	25	27	38	26	20	21	22	30	27	17	21	1	295	.....
8	1	1	21	24	40	27	35	22	29	28	20	28	20	19	..	313	.....
.....			.....							...	...	...	...	...		.....	608
4	..	5	10	10	10	9	11	12	10	22	16	23	17	19	..	169	.....
3	..	5	11	11	14	11	9	11	19	16	21	13	13	10	..	159	.....
.....			.....							...	...	...	...	1	..	1	329
43	..	29	222	223	258	284	243	240	259	324	260	292	239	254	4	3,102	.....
75	3	29	271	255	287	268	247	262	296	316	293	286	243	267	2	3,293	.....
.....		1	...	1	...	1	1	1	1	1	3	1	2	1	..	13	6,408
118	3	59	493	479	545	553	491	503	556	641	556	579	484	522	6	6,408	6,408

* Not including premature births and still births.

TABLE NO. XVII.

Causes of Death alphabetically arranged by Ages, Sex, and Months.

Sex.	Months. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	CAUSES OF DEATH.	Whole Number. Total.	Male.	Female.	Unknown.	Ages. Under 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Unknown.
M.				1					2					Abscess	6	3	3										1	1	1		
F.			1		1		1							"									1	1				1			
M.					1									" lumbar	1	1												1			
M.					1									" of bowels	2	1	1					1									
F.		1												" "											1						
M.		1		1				1						" of brain	5	3	2									1			1	1	
F.						1		1						" "						1								1			
M.					1									" of head	1	1							1								
F.												1		" of kidney	1		1									1					
M.			1						1	1		1		" of liver	5	4	1								1	1		1	1		
F.				1										" "													1				
M.			1				1							" of lungs	2	2											1		1		
F.										1				" of neck	1		1		1												
M.				1										" of pelvis	4	1	3				1										
F.									1	1	1			" "										1	1	1					
M.				1	1				1	1	2			Alcoholism	8	6	2							1	1	1		1	2		
F.		1		1										"										1					1		

M.	2	1	1	2	..	2	..	3	4	..	2	1	..	Anæmia	40	18	22	..	5	2	..	1	1	1	..	1	3	2	1	1	..
F.	1	1	1	2	4	1	3	4	1	1	2	1	..	"	..	..	..	..	5	..	..	..	..	3	3	4	..	4	2	1	..
M.	..	..	1	..	2	..	..	1	2	..	1	..	..	Angina pectoris	15	7	8	..	..	1	..	..	..	..	2	..	1	1	2	..	..
F.	..	..	..	..	2	1	1	..	..	2	1	1	..	" "	..	..	..	..	..	..	..	..	..	..	..	1	1	3	2	1	..
M.	14	14	8	8	2	9	7	10	6	10	10	13	..	Apoplexy	259	111	148	..	..	1	..	..	..	4	2	6	14	34	32	17	1
F.	11	6	10	16	12	17	11	15	15	11	13	11	..	"	..	..	..	..	1	..	..	..	..	2	2	10	29	31	42	31	..
M.	..	..	..	..	..	..	..	..	1	..	..	..	..	Arteries, disease of	1	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
M.	..	..	..	..	..	1	1	..	1	..	..	1	..	Asphyxia	7	4	3	..	4	..	..	..	..	..	..	..	..	..	..	..	..
F.	..	1	..	..	..	..	..	..	..	1	..	1	..	"	..	..	..	..	1	1	..	..	..	..	..	1	..	..	..	..	..
M.	..	..	..	..	..	..	..	..	1	1	..	2	..	Asthma	12	4	8	..	..	..	..	..	..	..	..	..	..	..	3	..	1
F.	..	..	..	..	3	1	..	..	1	2	1	..	..	"	..	..	..	..	1	1	..	..	..	..	..	1	1	1	1	2	..
F.	..	..	..	..	..	..	..	..	1	..	..	..	..	Ascites	1	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..
F.	..	..	..	..	..	..	..	..	1	..	..	..	..	Anthrax	1	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..
M.	..	..	..	..	..	..	1	1	..	1	..	..	..	Bladder, disease of	3	3	..	..	1	..	..	..	..	..	..	..	..	2	..	..	..
M.	..	..	..	1	1	1	..	1	1	1	1	..	..	Blood poisoning	13	7	6	..	1	..	..	..	1	..	..	1	1	..	3	..	..
F.	1	..	2	1	1	..	..	..	..	1	..	..	..	" "	..	..	..	..	..	..	..	..	..	3	..	1	1	1	..	..	..
M.	..	..	..	..	2	..	..	1	..	..	..	..	..	Bone, disease of	4	3	1	..	..	1	..	..	..	..	..	..	1	1	..	..	..
F.	..	..	..	..	..	..	..	..	1	..	..	..	..	" "	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..
M.	..	..	..	..	3	..	..	..	..	..	1	1	..	Bowels, disease of	15	5	10	..	1	1	..	..	..	..	..	..	..	3	..	..	..
F.	1	1	1	1	..	..	1	..	2	1	..	2	..	" "	..	..	..	..	1	..	..	..	..	2	1	1	1	1	3	..	..
M.	4	..	2	1	1	3	5	4	3	4	3	1	..	Brain, disease of	66	31	35	..	3	..	3	..	..	1	2	3	6	7	4	2	..
F.	1	3	..	2	3	2	2	4	5	5	3	5	..	" "	..	..	..	..	3	..	..	..	1	1	3	2	6	8	9	2	..
M.	1	1	2	3	1	1	3	3	..	2	2	1	..	Brain, softening of	36	20	16	..	..	..	..	..	..	1	2	..	2	4	10	1	..
F.	2	..	1	1	1	..	4	4	..	..	1	2	..	" "	..	..	..	..	..	..	..	..	..	..	..	1	4	4	4	3	..
M.	6	5	8	9	1	4	2	..	5	2	5	3	..	Bronchitis	127	50	77	..	15	11	1	..	..	1	..	5	5	4	5	3	..
F.	6	4	14	7	4	6	1	1	8	6	11	9	..	"	..	..	..	..	13	17	..	..	..	3	..	3	7	8	10	16	..
M.	..	1	..	1	..	..	..	1	..	1	2	3	..	Burns and scalds	15	9	6	..	..	6	..	..	1	..	..	..	..	1	..	1	..
F.	..	..	1	..	..	1	..	1	1	..	2	..	..	" "	..	..	..	..	..	1	1	..	..	1	1	..	1	1	..	..	..
F.	2	..	..	..	1	..	1	..	..	..	..	..	..	Calculus	4	..	4	..	..	..	..	..	..	1	..	1	1	..	1	..	..
M.	1	2	5	6	1	4	3	5	3	2	2	..	..	Cancer	113	34	79	..	..	1	..	..	..	1	1	1	4	9	14	3	..
F.	6	4	7	2	10	10	10	6	6	8	5	5	..	"	..	..	..	..	..	..	..	..	..	..	1	14	15	16	20	13	..

TABLE NO. XVII. — *Continued.*

Sex.	Months. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	CAUSES OF DEATH.	Whole Number. Total.	Male.	Female.	Unknown.	Ages. Under 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Unknown.
M.	..	..	..	..	..	..	..	..	1	..	..	..	..	Cancer of bladder	1	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
M.	..	..	1	1	1	1	1	..	..	1	..	1	..	" of bowels	10	7	3	..	..	..	..	..	..	..	1	..	1	1	3	1	..
F.	..	..	..	..	1	..	..	..	1	..	..	1	..	" "	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	..	..
F.	1	..	2	..	..	..	2	1	2	1	..	..	..	" of breast	9	..	9	..	..	..	..	..	..	..	..	..	2	5	..	1	1
F.	..	..	..	..	..	..	..	1	..	..	..	..	..	" of eye	1	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..
M.	..	..	..	1	..	..	..	..	..	..	1	..	..	" of face	2	2	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..
F.	..	..	..	..	..	..	..	..	1	..	..	..	..	" of gall-duct	1	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..
M.	..	..	..	..	..	1	..	..	..	..	..	..	..	" of kidney	1	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
M.	..	1	1	..	..	..	..	..	..	..	..	..	..	" of lip	2	2	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..
M.	..	..	1	..	..	..	..	..	..	1	..	..	..	" of liver	10	2	8	..	..	..	..	..	..	..	..	..	..	2	..	..	..
F.	1	1	..	..	1	..	1	..	1	1	1	1	..	" "	..	..	..	..	..	..	..	..	..	..	..	1	..	4	3	..	..
F.	..	..	1	..	..	..	..	..	..	..	..	..	..	" of lungs	1	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..
M.	..	..	..	..	..	1	..	..	..	..	..	..	..	" of pharynx	1	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
M.	..	..	1	1	1	..	..	..	..	..	..	..	..	" of rectum	8	3	5	..	..	..	..	..	..	..	..	..	..	..	2	1	..
F.	..	1	1	..	..	..	..	..	1	1	..	1	..	" "	..	..	..	..	..	..	..	..	..	..	1	..	1	1	2	..	..
M.	2	1	1	1	..	..	1	2	1	3	1	2	..	" of stomach	28	15	13	..	..	..	..	..	..	..	3	1	2	6	3	..	..
F.	1	2	1	..	1	2	..	..	1	1	..	4	..	" "	..	..	..	..	1	..	..	..	..	..	1	..	1	3	6	1	..
F.	..	..	1	..	..	..	..	1	..	..	..	..	..	" of throat	2	..	2	..	..	..	..	..	..	..	..	..	1	..	1	..	..
M.	..	..	..	..	..	..	1	..	..	1	..	..	..	" of tongue	2	2	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..
F.	2	3	..	2	4	1	4	..	1	1	1	2	..	" of uterus	21	..	21	..	..	..	..	..	..	1	2	7	5	4	2	..	..

M.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
M.	5	1	5	8	4	6	6	8	7	7	3	7	..	Casualty	80	67	13	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
F.	1	..	2	1	..	4	..	..	1	1	..	3	..	"	..	..	..	..	1	4	..	5	3	12	1	8	9	8	9	4	..	..	..	..	..	..
M.	..	..	..	..	..	..	..	..	..	..	..	1	..	Cellulitis	1	1	..	..	1	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
M.	4	2	5	2	..	2	..	2	3	1	3	1	..	Cephalitis	47	25	22	..	3	5	3	1	..	..	1	1	1	4	1	1	1	..	..	..	..	..
F.	1	2	3	1	4	2	..	3	2	1	1	2	..	"	..	..	..	..	5	4	..	..	2	4	2	1	2	..	1	..	1	..	..	..	..	..
M.	1	..	2	3	2	..	..	..	..	2	1	1	..	Cerebritis	28	12	16	..	3	2	1	1	..	3	1	..	..	..	1	..	..	..	..	..	..	..
F.	..	1	2	3	..	..	2	4	2	2	..	..	..	"	..	..	..	..	..	3	1	1	..	1	3	2	2	2	1	..	..	..	..	..	..	..
M.	1	..	1	2	..	1	1	2	1	..	1	..	..	Cerebro-spinal meningitis	25	10	15	..	1	4	2	1	..	..	..	..	..	..	1	..	1	..	..	..	..	..
F.	..	2	4	1	1	1	1	2	..	1	2	..	..	" " "	..	..	..	..	3	2	3	2	2	2	1	..	..	..	..	..	..	..	..	..	..	..
F.	3	3	2	1	1	3	..	..	1	1	2	2	..	Childbirth	19	..	19	..	..	..	..	..	1	8	7	3	..	..	..	..	..	..	..	..	..	..
M.	..	..	3	3	5	16	48	60	38	14	2	2	..	Cholera infantum	353	190	162	*1	165	24	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
F.	2	..	..	2	5	13	33	58	35	10	2	1	1	" "	..	..	..	..	152	30	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
M.	..	..	..	..	..	..	4	1	..	..	..	..	..	Cholera morbus	12	5	7	..	..	..	..	..	..	..	..	1	..	2	1	1	..	..	..	..	..	..
F.	..	..	..	..	..	..	2	4	1	..	..	..	..	" "	..	..	..	..	..	..	..	1	..	..	..	1	..	2	..	3	..	..	..	..	..	..
M.	..	..	1	..	..	..	..	..	..	..	..	1	..	Colic	2	2	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
M.	20	36	24	26	17	19	22	29	16	29	22	20	1	Consumption	651	280	370	*1	9	7	3	3	22	56	51	33	34	31	26	2	1	..	..	..	..	..
F.	34	27	45	28	28	29	41	27	31	23	26	31	..	"	..	..	..	..	5	8	4	19	37	91	69	44	22	34	27	8	2	..	..	..	..	..
M.	1	2	5	8	2	4	2	3	2	1	4	4	..	Convulsions	71	38	33	..	26	8	2	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..
F.	4	4	6	2	4	..	4	..	5	2	1	1	..	"	..	..	..	..	18	12	..	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..
M.	..	..	..	..	..	..	..	..	1	..	..	..	..	Cramps	1	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
M.	4	6	2	2	4	2	1	4	4	8	3	8	..	Croup	88	47	40	*1	3	39	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
F.	2	3	4	2	4	2	2	1	2	4	5	9	..	"	..	..	..	..	8	26	5	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
M.	..	..	..	..	..	..	..	2	1	..	..	..	..	Cyanosis	10	3	7	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
F.	1	..	..	1	..	1	..	1	..	2	1	..	..	"	..	..	..	..	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
M.	3	1	1	3	2	2	2	1	2	3	1	6	..	Cystitis	30	27	3	..	..	..	..	..	..	..	..	1	..	2	6	7	11	..	..	..	..	..
F.	..	..	1	..	..	1	..	..	..	..	1	..	..	"	..	..	..	..	..	..	..	..	..	..	..	1	1	..	1	..	..	..	..	..	..	..
M.	7	4	7	3	5	9	3	11	7	5	6	5	..	Debility	159	72	87	..	39	..	1	..	..	..	..	2	2	7	11	10	..	..	..	..	..	..
F.	4	8	9	11	6	5	7	8	13	6	3	7	..	"	..	..	..	..	35	2	1	..	1	3	2	..	7	7	15	13	1	..	..	..	..	..
M.	1	..	..	..	..	..	..	..	..	..	..	..	..	Delirium tremens	1	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..

* Classed with males.

TABLE NO. XVII. — *Continued.*

Sex.	Months. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	CAUSES OF DEATH.	Whole Number. Total.	Male.	Female.	Unknown.	Ages. Under 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Unknown.
M.	1	2	1	1	3	3	2	..	3	..	..	..	..	Diabetes	25	16	9	..	..	..	..	1	..	..	4	1	2	3	4	1	..
F.	..	2	1	1	..	..	..	1	..	2	1	1	..	"	..	..	..	..	..	1	..	1	..	1	1	1	1	2	1	..	..
M.	3	..	1	1	2	2	5	10	7	3	4	2	..	Diarrhea	68	40	28	..	18	5	..	..	..	1	1	2	3	3	3	4	..
F.	..	1	2	..	..	3	4	8	5	4	..	1	..	"	..	..	..	..	16	..	..	..	..	..	1	2	..	4	3	1	1
M.	3	1	3	6	5	5	3	8	11	24	13	11	..	Diphtheria	210	92	117	*1	3	41	27	9	5	4	1	2	..	1	..	..	..
F.	10	8	7	9	8	10	8	8	7	17	10	15	..	"	..	..	..	..	4	45	41	9	8	6	2	1	..	..	..	..	1
M.	2	1	..	2	2	4	1	4	3	3	2	2	..	Dropsy	62	26	36	..	..	1	..	..	..	..	..	2	3	8	11	1	..
F.	1	4	1	1	6	3	2	3	6	3	3	3	..	"	..	..	..	..	..	..	..	..	..	..	2	2	8	8	10	6	..
M.	2	1	1	3	6	3	5	3	1	1	..	4	..	Drowned	34	30	4	..	..	3	5	4	5	4	2	4	..	1	..	1	1
F.	..	1	..	..	1	..	..	1	1	..	..	..	..	"	..	..	..	..	..	1	..	..	1	1	..	..	1	..	..	..	..
M.	..	..	1	..	..	3	4	10	5	3	1	..	..	Dysentery	67	27	40	..	13	4	1	..	..	..	1	1	..	3	..	4	..
F.	..	..	1	1	..	4	8	12	8	5	1	..	..	"	..	..	..	..	7	4	1	..	..	1	1	2	3	6	7	8	..
M.	..	..	..	..	..	1	..	..	..	1	..	..	..	Dyspepsia	4	2	2	..	..	..	..	..	..	..	..	..	..	1	..	1	..
F.	..	..	..	..	1	..	1	..	..	..	..	..	..	"	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..
M.	1	1	..	..	..	..	..	..	..	1	..	..	..	Eclampsia	5	3	2	..	2	..	..	..	..	..	..	..	1	..	..	..	..
F.	..	..	..	..	..	..	1	..	..	..	..	1	..	"	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..
F.	..	..	..	..	..	..	..	..	1	..	..	..	..	Elephantiasis	1	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..
M.	..	..	..	..	..	1	..	..	..	..	..	..	..	Embolism	5	1	4	..	..	..	..	..	..	..	..	..	..	..	..	1	..
F.	..	..	1	..	1	..	..	..	..	1	..	1	..	"	..	..	..	..	..	..	..	..	..	..	2	..	..	1	1	..	..
M.	2	2	1	..	1	2	2	4	..	..	2	1	..	Enteritis	30	17	13	..	5	3	1	..	..	..	..	1	2	2	3	..	..

F.	..	..	1	1	..	2	1	2	2	2	..	2	..	Enteritis	..	..	..	..	..	1	1	1	..	3	1	..	1	4	1	..	..
M.	1	1	..	2	..	1	2	..	..	..	2	1	..	Epilepsy	21	10	11	..	..	..	..	1	..	3	1	2	..	..	2	..	1
F.	..	..	2	2	1	2	1	..	..	1	1	1	..	"	..	..	..	..	1	..	..	2	..	3	2	..	2	..	1	..	..
M.	2	2	1	1	..	..	..	1	..	..	1	1	..	Erysipelas	18	9	9	..	2	..	..	..	..	..	..	..	2	2	2	1	..
F.	1	..	2	..	2	..	..	1	..	1	..	2	..	"	..	..	..	..	..	..	..	..	..	1	1	1	1	1	1	3	..
M.	..	2	1	..	1	..	..	..	..	..	..	2	..	Exposure	7	6	1	..	..	..	..	..	..	..	1	2	..	2	1	..	..
F.	..	..	..	..	..	..	..	..	..	..	..	1	..	"	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
M.	..	2	..	..	..	..	..	1	3	7	2	..	..	Fever	28	15	13	..	2	1	..	..	2	7	1	..	1	..	1	..	..
F.	1	..	..	..	1	1	..	..	3	3	3	1	..	"	..	..	..	..	2	..	2	1	1	3	..	2	..	..	..	1	1
M.	..	..	1	..	..	..	..	..	1	..	..	..	..	" bilious	4	2	2	..	..	..	..	..	..	..	..	..	..	1	1	..	..
F.	..	..	1	..	..	..	..	1	..	..	..	..	..	" "	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..
M.	..	..	..	..	..	..	..	..	1	..	..	..	..	" gastric	4	1	3	..	..	..	1	..	..	..	..	..	..	..	..	..	..
F.	1	..	..	..	..	..	1	1	..	..	..	..	..	" "	..	..	..	..	1	..	..	..	..	..	..	1	..	..	1	..	..
M.	..	..	..	..	..	..	..	..	..	..	..	1	..	" intermittent	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
M.	..	1	1	1	1	1	2	..	..	..	..	1	..	" malarial	8	8	..	..	..	..	..	..	1	1	..	2	3	1	..	..	..
F.	..	..	2	2	..	1	1	1	..	2	1	..	..	" puerperal	10	..	10	..	..	..	..	..	1	8	1	..	..	..	..	..	..
M.	1	..	..	..	..	1	..	..	..	..	..	..	..	" rheumatic	3	2	1	..	..	..	..	1	..	..	..	..	1	..	..	..	..
F.	..	..	..	..	..	..	..	..	..	1	..	..	..	" "	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
M.	6	1	2	1	2	4	6	6	6	12	8	12	..	" typhoid	127	66	61	..	..	3	2	4	9	27	9	6	2	2	.	2	..
F.	3	3	3	6	3	2	6	7	7	12	9	..	..	" "	..	..	..	..	..	1	5	9	14	12	2	6	6	2	3	1	..
M.	..	..	1	..	..	..	..	..	..	1	..	..	..	" typho-malarial	2	2	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..
M.	1	..	..	1	1	1	..	..	1	..	..	..	..	Fits	6	5	1	..	4	..	..	..	..	..	..	1	..	..	..	..	..
F.	..	..	..	..	..	..	..	..	1	..	..	..	..	"	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
M.	..	..	..	..	..	..	1	..	..	..	..	..	..	Fistula	2	1	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..
F.	..	1	..	..	..	..	..	..	..	..	..	..	..	"	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
M.	1	3	2	1	..	..	3	2	3	1	..	1	..	Fracture	24	17	7	..	1	..	1	..	..	2	4	4	3	..	2	..	..
F.	..	..	..	..	..	1	1	..	2	1	2	..	..	"	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	5	..
M.	..	..	1	..	1	1	1	2	..	1	..	..	..	Gangrene	19	7	12	..	..	..	..	..	..	..	..	..	..	..	3	4	..
F.	..	..	2	1	2	2	1	1	..	3	..	..	..	"	..	..	..	..	..	..	..	..	..	1	..	..	..	5	3	3	..
M.	..	1	1	1	2	..	1	3	..	1	1	2	..	Gastritis	38	13	25	..	..	..	..	1	..	1	3	1	..	3	3	1	..

* Classed with males.

TABLE NO. XVII. — *Continued.*

Sex.	Months. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	CAUSES OF DEATH.	Whole Number. Total.	Male.	Female.	Unknown.	Ages. Under 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Unknown.
F.	1	3	..	3	3	3	1	1	3	2	3	2	..	Gastritis	...	...	...	.	2	..	..	1	2	2	1	2	3	3	5	4	..
F.	..	1	..	..	..	2	..	..	..	..	..	..	..	Goitre	3	...	3	..	..	..	1	..	..	..	..	..	1	..	1	..	..
M.	.	1	..	..	..	..	..	..	..	..	..	..	..	Gonorrhea	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
M.	25	17	25	32	32	17	21	16	17	27	24	22	1	Heart disease	541	275	265	*1	12	1	2	1	8	5	8	15	22	59	93	49	1
F.	27	16	24	25	21	18	22	24	22	17	28	21	..	" "	..	..	..	..	10	1	1	3	4	15	19	20	35	59	73	24	1
M.	..	1	..	..	1	..	..	..	1	2	..	..	..	Hemorrhage	12	5	7	..	..	..	..	..	..	1	1	1	..	1	1	..	..
F.	1	1	1	..	..	..	1	..	..	..	3	..	..	"	..	..	..	..	3	..	..	..	..	..	..	1	1	1	..	1	..
M.	..	..	3	4	2	1	..	1	1	1	1	3	..	Hepatitis	26	17	9	..	..	..	..	..	..	..	1	2	5	7	2	..	..
F.	1	..	..	..	..	..	..	1	1	2	3	1	..	"	..	..	..	..	..	..	..	..	..	..	3	1	..	1	..	3	1
M.	..	1	..	2	..	..	..	2	1	..	2	2	..	Hernia.	16	10	6	..	3	..	..	1	..	..	1	..	..	2	2	1	..
F.	..	1	1	1	..	..	..	1	1	1	..	..	..	"	..	..	..	..	2	..	..	..	..	..	..	..	..	4	..	..	..
M.	1	1	..	..	..	..	..	..	..	..	..	..	..	Hip disease	3	2	1	..	..	1	1	..	..	..	..	..	..	..	..	..	..
F.	..	..	..	..	..	..	..	1	..	..	..	..	..	" "	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
M.	..	..	..	..	..	1	..	..	..	..	..	..	..	Homicide	4	1	3	..	..	..	..	..	..	..	..	..	..	1	..	..	..
F.	..	..	..	..	..	1	..	..	..	..	1	1	..	"	..	..	..	..	..	..	..	..	..	..	1	..	..	2	..	..	..
M.	3	1	1	2	..	2	..	1	..	..	1	..	..	Hydrocephalus	21	11	10	..	7	4	..	..	..	..	..	..	..	..	..	..	..
F.	1	1	..	1	..	..	1	..	4	..	..	2	..	"	..	..	..	..	6	4	..	..	..	..	..	..	..	..	..	..	..
M.	..	..	..	..	..	..	..	..	1	..	..	..	..	Hydropericarditis	1	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
M.	..	..	..	..	..	..	..	..	..	..	..	1	..	Hydrophobia	1	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
M.	..	..	..	..	..	..	..	..	..	..	1	..	..	Hydrothorax	1	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..

F.		1																																		
M.	2				1		1								1																				3	
F.		1												2	1	1																				
M.		4	1	2	1	2	4	1	2	1	1																									
F.	3	1				1	1	1	3	2																										
M.			1		1																															
F.		1		1																																
F.						1								1																						
M.	1	1	1	1		1	1	1	1	1	3	2																								
F.			1	2	2		2	3	1			1																								
M.	1																																			
F.	1			1			1																													
M.	1	1	3	1		2	1	2	1		1	1																								
F.	1	2	2	1			3	2	1	4																										
M.			1																																	
M.					1																															
M.	1					1																														
F.	1					1	1																													
M.		6	3		5		1	2	1	1	3	1																								
F.	1		2	2		2	1	1				1																								
M.								1																												
F.				1								1																								
M.	1	2	2	3		1	2	3	1	1	4	2																								
F.	2	4	1		1		5		2	3		3																								
M.		2					1	1		1	2																									
F.	1																																			
M.									1	1																										
F.								1																												
M.				3	1	2	1	2																												
F.		2		1		2	1		1		1	1																								

Icterus	1		1		1																															
Ileus	10	5	5		1									1																					3	
"						1																	2	1		1										
Inanition	31	17	12	*2	14																		1	1		2	1									
"					9	1																		1	1											
Infantile	4	2	2		2																															
"					1		1																													
Inflammation	2		2										1		1																					
" of bowels	26	14	12		1	3					2	1	2	2	1	1	1																			
" "						1	1	1		1	1	2	1	1	3																					
Influenza	4	1	3		1																															
"					2											1																				
Insanity	30	14	16								3		1	2	2	4	1	1																		
"											2	4	1	1	2	1	4	1																		
Intussusception	1	1				1																														
Ischuria	1	1														1																				
Jaundice	6	2	4		1										1																					
"															1	2	1																			
Kidney disease	33	23	10		1								2	2	4	10	4																			
" "					1									2	3	3	1																			
Laryngitis	3	1	2		1																															
"						1									1																					
Liver disease	43	22	21		1			1				3	2	3	2	7	3																			
" "					1	1							3	6	6	4																				
" cirrhosis of	8	7	1									1	1	3	1	1																				
" "															1																					
Locomotor ataxia	3	2	1												1	1																				
" "																																				
Lung disease	18	9	9		2	1					1		1	1	2		1																			
" "					3	2	1		1	1						1																				

* Classed with males.

TABLE NO. XVII. — *Continued.*

Sex.	Months.													CAUSES OF DEATH.	Whole Number.				Ages.												
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.		Total.	Male.	Female.	Unknown.	Under 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Unknown.
M.	..	1	..	1	2	3	..	1	..	1	1	1	..	Malformation	20	10	9	*1	11	..	..	..	..	..	..	..	..	..	..	..	..
F.	..	1	2	2	..	..	1	..	1	1	1	..	..	"	..	..	..	..	9	..	..	..	..	..	..	..	..	..	..	..	..
F.	..	..	1	..	..	..	..	..	..	..	..	..	..	Malignant pustule	1	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..
M.	..	1	..	..	..	..	1	..	..	..	..	..	..	Maniacal exhaustion	5	2	3	..	..	..	..	..	..	..	..	2	..	..	..	..	..
F.	..	1	..	..	..	..	..	1	..	1	..	..	..	" "	..	..	..	..	..	..	..	..	..	1	1	1	..	..	..	..	..
M.	1	1	2	1	..	1	2	2	5	3	..	2	..	Marasmus	52	20	32	..	12	2	1	..	..	..	..	..	1	..	2	2	..
F.	..	1	1	5	2	2	..	5	4	6	3	3	..	"	..	..	..	..	21	3	..	..	..	..	1	..	..	3	1	3	..
M.	..	..	1	1	1	2	..	..	..	..	..	3	..	Measles	16	8	8	..	1	2	..	..	1	2	1	..	..	..	..	..	1
F.	2	..	2	1	..	..	1	..	..	..	2	..	..	"	..	..	..	..	1	4	1	..	1	..	..	..	1	..	..	..	..
M	3	4	1	5	1	3	4	5	1	2	3	7	..	Meningitis	67	39	28	..	8	17	4	2	4	1	3	..	..	..	..	..	..
F.	..	4	1	..	3	4	4	1	3	3	1	4	..	"	..	..	..	..	12	6	1	..	2	..	2	1	1	..	3	..	..
F.	2	..	..	..	1	..	..	1	..	..	..	..	..	Metria (puerperal fever)	4	..	4	..	..	..	..	..	..	2	1	1	..	..	..	..	..
F.	..	1	..	..	..	..	..	..	..	..	2	..	..	Metritis	3	..	3	..	..	..	..	..	..	1	1	1	..	..	..	..	..
M.	..	..	..	1	..	..	..	..	1	..	..	..	..	Mortification	2	2	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..
M.	..	..	..	..	2	..	2	..	1	..	..	..	..	Myelitis	9	5	4	..	2	..	2	..	..	..	..	..	..	..	..	1	..
F.	..	..	..	..	1	..	..	..	..	3	..	..	..	"	..	..	..	..	2	..	..	..	..	..	2	..	..	..	..	..	..
F.	..	1	..	..	..	..	..	..	..	..	..	..	..	Narcotism	1	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..
M.	6	..	5	11	8	6	6	8	7	1	5	4	..	Nephria (Bright's disease)	128	67	61	..	..	..	..	..	1	3	3	5	16	22	14	3	..
F.	5	8	5	1	5	5	8	2	5	8	5	4	..	" " "	..	..	..	..	..	1	..	..	2	6	11	9	10	6	12	4	..
M.	..	..	3	1	2	2	1	2	2	2	1	1	..	Nephritis	28	17	11	..	..	..	1	..	..	2	1	3	2	3	5	..	..

F.	1	1	..	..	..	..	2	2	1	1	3	..	..	Nephritis	..	..	..	..	1	..	..	..	..	..	1	2	..	3	2	1	1
M.	..	..	..	..	1	1	..	..	..	..	..	..	..	Nervous prostration	15	2	13	..	..	..	..	..	..	..	..	2	..	..	..	..	..
F.	2	..	2	..	..	1	2	1	..	2	1	2	..	" "	..	..	..	..	..	..	1	..	1	..	1	1	1	4	1	2	1
F.	1	1	..	..	..	..	..	..	..	..	..	..	..	Neuralgia	2	..	2	..	..	..	..	..	..	1	..	..	..	1	..	..	..
M.	..	..	..	..	..	..	..	..	..	..	1	..	..	Noma (canker)	4	1	3	..	1	..	..	..	..	..	..	..	..	..	..	..	..
F.	..	..	..	1	1	..	..	1	..	..	..	..	..	" "	..	..	..	..	2	1	..	..	..	..	..	..	..	..	..	..	..
M.	6	7	9	6	15	13	13	12	11	5	9	6	2	Not stated	214	109	100	*5	50	8	1	..	2	..	5	6	11	5	15	6	5
F.	7	12	13	7	6	12	9	9	7	3	4	10	1	"	..	..	..	..	33	4	2	1	3	8	5	3	4	5	13	9	10
M.	14	18	21	14	25	17	11	14	10	23	13	16	..	Old age	426	196	230	..	..	..	..	..	..	..	..	..	..	..	39	156	1
F.	20	22	18	24	21	20	14	20	14	16	19	22	..	"	..	..	..	..	..	..	..	..	..	..	..	..	..	3	45	181	1
F.	1	1	1	1	1	2	1	..	..	1	..	..	..	Ovarian dropsy	9	..	9	..	..	..	..	..	..	..	3	2	1	1	2	..	..
F.	..	..	..	..	..	..	..	..	..	..	..	1	..	Otitis media	1	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..
M.	7	7	7	6	9	5	10	5	8	9	3	4	..	Paralysis	193	80	113	..	1	1	..	..	..	2	3	6	6	18	26	17	..
F.	12	15	8	5	8	9	14	8	10	5	11	8	..	"	..	..	..	..	..	3	..	..	..	2	2	8	11	23	31	32	1
F.	..	..	..	1	..	..	1	..	..	..	..	..	..	Paramenia	2	..	2	..	..	..	..	..	2	..	..	..	..	..	..	..	..
M.	2	..	..	1	..	..	..	3	1	1	..	2	..	Pericarditis	15	10	5	..	..	..	1	..	2	..	2	1	1	1	1	1	..
F.	..	..	1	1	1	..	..	..	..	1	..	1	..	"	..	..	..	..	..	..	1	..	..	..	..	..	..	2	2	..	..
M.	1	..	2	1	2	2	2	3	2	2	2	4	..	Peritonitis	57	23	34	..	2	..	..	2	2	3	6	2	..	3	1	1	1
F.	7	1	3	1	3	5	1	4	..	6	3	..	..	"	..	..	..	..	2	1	1	1	5	5	8	..	3	4	3	1	..
M.	..	..	..	..	..	..	..	..	..	..	..	1	..	" traumatic	1	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..
F.	1	1	..	..	..	1	..	1	2	3	1	1	..	Pleurisy	16	11	5	..	..	..	1	..	..	..	2	1	3	..	4	..	..
M.	..	..	..	..	..	..	2	1	..	1	1	..	..	"	..	..	..	..	..	..	..	..	..	1	..	2	..	1	1	..	..
F.	24	28	40	49	24	13	6	7	6	21	23	21	..	Pneumonia	544	262	282	..	33	22	4	4	9	11	19	13	22	35	48	41	1
M.	40	36	31	48	21	8	9	11	8	27	16	27	..	"	..	..	..	..	28	25	4	6	6	14	14	21	23	54	49	37	1
F.	4	2	2	3	4	..	..	..	2	1	1	..	..	Pneumonia-typhoides	38	19	19	..	..	2	..	..	1	4	2	2	2	3	1	..	2
M.	1	..	6	2	2	1	..	1	..	4	1	1	..	" "	..	..	..	..	..	1	..	2	1	..	1	4	1	6	2	1	..
F.	..	..	..	..	..	1	..	..	..	1	..	..	..	Poisoned	4	2	2	..	..	..	..	..	..	1	..	..	..	1	..	..	..
M.	..	..	..	..	..	..	..	1	..	..	..	1	..	"	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..
F.	..	..	..	1	..	..	..	..	..	..	..	..	..	" morphine	2	1	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..
F.	..	..	..	..	..	1	..	..	..	..	..	..	..	" "	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..

* Classed with males.

TABLE NO. XVII. — *Continued.*

Sex.	Months. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	CAUSES OF DEATH.	Whole Number. Total.	Male.	Female.	Unknown.	Ages. Under 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Unknown.
M.	2	8	6	2	2	4	6	5	4	6	1	1	..	Premature births	68	43	21	*4	47	..	..	..	..	..	..	..	..	..	..	..	..
F.	1	1	..	..	5	2	3	2	1	3	3	..	..	" "	..	..	..	..	21	..	..	..	..	..	..	..	..	..	..	..	..
M.	..	..	..	..	1	..	..	..	..	2	2	2	..	Prostate, disease of	7	7	..	..	..	..	..	..	..	..	..	..	1	1	3	2	..
F.	..	1	..	..	1	1	..	..	..	..	..	..	..	Puerperal convulsions	3	..	3	..	..	..	..	..	..	2	1	..	..	..	..	..	..
F.	..	..	..	..	1	..	..	..	..	..	..	..	..	" mania	1	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..
F.	1	..	..	..	1	..	2	..	..	..	..	..	..	" septicæmia	4	..	4	..	..	..	..	..	1	2	1	..	..	..	..	..	..
M.	..	..	..	..	..	..	..	..	1	..	..	..	..	Purpura (scurvy)	2	1	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..
F.	..	..	..	..	..	..	..	..	..	..	..	1	..	" "	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
M.	..	..	..	1	..	1	..	..	..	..	..	1	..	Pyæmia	9	3	6	..	..	1	..	..	..	..	1	..	..	1	..	..	..
F.	1	..	1	..	1	1	1	..	..	..	..	1	..	"	..	..	..	..	..	..	..	..	..	1	3	1	..	..	1	..	..
M.	..	1	1	..	..	1	1	1	1	4	1	2	..	Railroad accident	16	13	3	..	..	..	..	..	..	5	3	..	2	1	..	..	2
F.	..	1	..	..	..	1	..	..	..	..	..	1	..	" "	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..
M.	1	2	3	1	1	4	..	..	..	4	2	3	..	Rheumatism	40	21	19	..	..	..	1	..	..	3	2	1	3	1	5	4	1
F.	1	2	4	..	1	2	4	1	2	..	2	..	..	"	..	..	..	..	..	1	..	2	2	2	1	1	6	1	2	1	..
M.	1	..	..	..	2	..	1	..	2	..	..	..	..	Scarlatina	18	6	12	..	1	4	1	..	..	..	..	..	..	..	..	..	..
F.	1	1	2	1	..	..	2	3	..	1	..	1	..	"	..	..	..	..	3	3	2	2	1	..	..	..	..	..	..	..	1
M.	1	..	1	..	1	..	..	2	1	1	..	1	..	Scrofula	17	8	9	..	2	..	1	..	..	1	1	..	1	1	..	1	..
F.	2	1	..	2	1	1	1	..	..	..	..	1	..	"	..	..	..	..	1	1	2	..	1	..	1	..	..	2	..	1	..
M.	1	1	1	..	1	..	1	1	1	..	..	..	..	Septicæmia	16	7	9	..	..	..	..	..	..	1	2	..	2	1	1	..	..
F.	..	1	1	1	1	..	1	1	1	..	..	2	..	"	..	..	..	..	1	..	..	1	1	1	1	1	..	2	1	..	..

M.				1	1									1		Shock	4	3	1												2	1		
F.	1															"											1								
F.			1			1			2							Spina bifida	4		4		4															
M.									1	1						Spinal cord, disease of	3	2	1													2			
F.							1									" " "														1					
M.							1	2								Spine, disease of	6	3	3						1					1	1				
F.				1		1	1									" "											2				1				
M.								1								Spleen disease	1	1													1				
M.										1						Starvation	1	1			1															
M.	15	7	6	17	18	13	9	10	11	10	16	13	1			Still-born	220	109	74	*37	146															
F.	13	5	4	8	5	6	4	4	5	2	11	7				"					74															
M.						1	2		1		1	3				Stomach disease	21	8	13		2	1					1	1		2	1				
F.	2	1		1	1	2	3	1			1	1				" "					3					2	1		2	2	3				
M.			1													Strangulation	2	1	1												1				
F.		1														"														1					
M.	1	2	1	4		3	1	2		2	2	2				Suicide	29	20	9							3	4	3	4	2	4				
F.	2			2		2			1	2						"										1	1	1	2	2	1	1			
M.					1				1			1				Syphilis	7	3	4		2										1				
F.				1	1	1					1					"						1					1		1	1					
M.							3	1	2	1						Tabes mesenterica	13	7	6		2		1				3				1				
F.		1				1		1		1	1	1				" "					1					1		2	1			1			
M.			1	1		1	1		1	1	4	1				Teething	18	11	7		6	5														
F.	1					2		1	1	1	1					"					5	2													
M.					2											Tetanus	3	2	1					1						1					
F.												1				"											1								
M.	3		3	1			1	1		1						Tubercular meningitis	24	10	14		1	5	3	1												
F.	1		1	2	2	4		1			1	2				" "					1	6	1	2	1	2	1								
M.			2			1				1		1				Tumor	13	5	8							1	1	2			1				
F.	2	1	1		1			1			1	1				"												2	2	3				1	
F.	1															Ulcers	1		1											1					

* Classed with males.

TABLE NO. XVII. — *Continued.*

Sex.	Months. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	CAUSES OF DEATH.	Whole Number. Total.	Male.	Female.	Unknown.	Ages. Under 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Unknown.
M.	..	1	..	..	..	..	1	1	..	..	..	..	..	Ulcers of intestines	9	3	6	..	..	..	..	..	..	..	..	..	2	1	..	..	..
F.	2	..	1	..	..	1	..	1	..	1	..	..	..	" "	..	..	..	..	..	..	..	..	..	2	..	1	..	1	1	1	..
M.	..	..	..	..	..	2	..	..	..	..	1	..	..	" of stomach	7	3	4	..	..	..	..	..	..	..	..	..	2	1	..	..	..
F.	..	..	..	2	1	1	..	..	..	..	..	..	..	" "	..	..	..	..	1	..	..	..	..	..	1	..	1	1	..	..	..
M.	2	6	1	1	..	1	1	2	..	..	1	1	..	Unknown	26	16	10	..	9	4	..	..	..	..	..	1	..	2	..	..	..
F.	..	3	..	1	1	1	..	1	2	..	1	..	..	"	..	..	..	..	6	..	..	..	1	..	..	..	1	..	2	..	..
M.	2	..	..	..	..	1	..	..	2	..	1	1	..	Uræmia	10	7	3	..	..	..	..	..	1	..	..	..	..	4	2	..	..
F.	..	..	..	..	..	..	..	1	2	..	..	..	..	"	..	..	..	..	..	..	..	..	..	1	1	..	..	..	1	..	..
F.	1	..	..	..	..	..	..	1	..	..	..	..	..	Uterus disease	2	..	2	..	..	..	..	..	..	..	..	1	1	..	..	..	..
M.	2	1	..	2	3	3	2	4	2	1	2	1	..	Whooping-cough	47	23	24	..	15	7	1	..	..	..	..	..	..	..	..	..	..
F.	4	1	..	2	2	3	1	3	3	2	2	1	..	" "	..	..	..	..	17	7	..	..	..	..	..	..	..	..	..	..	..
M.	..	1	..	..	1	..	..	..	..	..	1	..	..	Wounds	3	3	..	..	..	..	..	..	1	..	..	..	..	1	1	..	..
M.	..	1	..	1	1	..	..	1	..	1	1	..	..	" gun-shot	8	6	2	..	..	..	..	1	..	..	1	..	..	3	..	..	1
F.	1	..	..	..	..	..	..	..	..	..	1	..	..	" "	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..

TABLE NO. XVIII.

*Deaths by Sex, Age, amd Month.**

MONTHS.	SEX.	Under 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Age not stated.	Total.
January	Males	24	20	13	5	9	14	15	10	21	27	36	28	....	222
	Females	26	15	5	3	16	23	27	14	21	45	35	33	5	271
	Not stated	....	....	....	....	....	....	....	....	....	....	....	....	....	.....
February	Males	26	26	4	2	6	14	13	11	18	31	39	31	2	223
	Females	30	15	8	4	9	24	17	13	25	29	39	33	3	255
	Not stated	....	....	....	....	....	1	....	....	....	....	....	....	....	1
March	Males	32	17	4	7	3	13	17	17	29	25	49	44	1	258
	Females	27	13	11	10	8	22	25	19	29	36	47	38	2	287
	Not stated	....	....	....	....	....	....	....	....	....	....	....	....	....	.....
April	Males	41	24	7	7	7	13	13	18	21	49	49	32	3	284
	Females	31	16	7	8	8	30	14	17	15	30	45	44	3	268
	Not stated	1	....	....	....	....	....	....	....	....	....	....	....	....	1
May	Males	26	18	4	4	7	19	19	14	16	28	43	43	2	243
	Females	22	13	5	1	9	17	22	16	29	35	37	40	1	247
	Not stated	1	....	....	....	....	....	....	....	....	....	....	....	....	1

* Not including still births and premature births.

TABLE NO. XVIII. — *Continued.*

MONTHS.	SEX.	Under 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Age not stated.	Total.
June	Males	54	16	6	2	5	12	8	16	21	34	36	28	2	240
	Females	46	25	6	10	6	20	22	18	17	22	33	36	1	262
	Not stated	....	....	....	....	1	....	....	....	....	....	....	....	....	1
July	Males	74	19	7	1	5	13	16	17	17	29	31	28	2	259
	Females	58	17	6	6	14	18	15	34	22	35	35	33	3	296
	Not stated	1	....	....	....	....	....	....	....	....	....	....	....	....	1
August	Males	100	31	7	4	5	17	16	15	25	23	47	28	6	324
	Females	79	29	8	5	8	12	19	21	19	33	39	42	2	316
	Not stated	....	1	....	....	....	....	....	....	....	....	....	....	....	1
September	Males	67	31	11	3	3	13	17	12	18	27	38	17	3	260
	Females	73	25	6	5	8	25	14	20	22	38	31	24	2	293
	Not stated	2	1	....	....	....	....	....	....	....	....	....	....	....	3
October	Males	31	28	11	6	11	20	18	20	16	45	44	41	1	292
	Females	36	22	11	6	12	25	18	18	22	34	45	35	2	286
	Not stated	1	....	....	....	....	....	....	....	....	....	....	....	....	1

November	Males	32	17	10	1	10	21	16	11	21	26	43	29	2	239
	Females	18	29	4	7	5	22	18	18	19	24	36	43	....	243
	Not stated	1	....	....	....	....	....	....	....	....	....	....	....	1	2
December	Males	28	22	6	5	13	18	18	14	18	37	37	35	3	254
	Females	24	25	11	5	6	13	15	14	27	37	49	37	4	267
	Not stated	1	....	....	....	....	....	....	....	....	....	....	....	....	1
No date	Males	1	....	....	....	....	....	....	....	....	....	....	1	2	4
	Females	....	1	....	....	....	....	....	....	....	....	....	....	1	2
	Not stated	....	....	....	....	....	....	....	....	....	....	....	....	....	.....
Total	Males	536	269	90	47	84	187	186	175	241	381	492	385	29	3,102
	Females	470	245	88	70	109	251	226	222	270	398	471	444	29	3,293
	Not stated	8	2	....	....	1	1	....	....	....	....	....	....	1	13

REGISTRATION REPORT.

SUMMARY OF OBSERVATIONS

FOR THE YEAR 1889.

SUMMARY

OF

REGISTRATION REPORT.

The following summary of observations is intended to present, in a brief and concise form, some of the more important facts deducted from the registration of births, marriages, divorces, and deaths in the State of New Hampshire for the year 1889.

In order to make calculations that shall be of practical value, two requirememts are necessary: First, approximate correctness in the registration; and, second, approximate accuracy in the population figures for the periods embraced in the computations. In this State the census is enumerated but once in ten years, and it is evident to every one that deductions from the registration of 1889, based upon the census of 1880, would not reveal the true birth, marriage, and death rates of the present population. Through the courtesy of the superintendent of census for the district of New Hampshire, we are able to make our calculations for the year 1889 upon the census of 1890, thus rendering the results much more accurate than if the census of 1880 were used.

In some tables we have figured the population for each year from 1880 to 1889, inclusive, averaging the increase as shown by the census of 1890. The population of the State in 1880 and 1890, by counties, is shown in the following table :

TABLE NO. 1.

Population of Counties in 1880 *and* 1890.

COUNTIES.	1880.	1890.
Rockingham	49,064	49,728
Strafford	35,558	38,439
Belknap	17,948	20,285
Carroll	18,224	18,111
Merrimack	46,300	49,401
Hillsborough	75,634	93,131
Cheshire	28,734	29,728
Sullivan	18,161	17,286
Grafton	38,788	37,334
Coös	18,580	23,164
Total	346,991	376,607

The increase in the population of the State has been of even or very nearly even yearly growth, hence by averaging the increase we are able to present a table showing the yearly population of the State from 1880 to 1889, as nearly correct as it is possible to obtain it:

TABLE NO. 2.

Estimated Population of New Hampshire for each Year from 1880 *to* 1890, *inclusive.*

YEARS.	Population.	YEARS.	Population.
1880	346,991	1886	364,767
1881	349,952	1887	367,728
1882	352,913	1888	370,689
1883	355,874	1889	373,650
1884	358,845	1890	376,607
1885	361,806		

It should be remembered that wherever "estimated" population is used, it is upon the basis above stated.

There were reported for the year 1889, 6,912 births, 3,621 marriages, and 6,696 deaths, showing an increase of 469 births and 242 marriages over the returns for 1888, and a decrease of 158 deaths from the report of 1888. The rate per cent, based upon the population of 1890, is as follows:

Birth-rate . .	18.35	to 1,000	of the population	of 1890.
Marriage-rate .	9.61	"	"	"
Persons married	19.22	"	"	"
Death-rate .	17.77	"	"	"

This is a rate of one birth to every 54 persons, one marriage ceremony (two persons) to every 100 persons, and one death to every 55 persons of the living population.

Table No. 3 shows the estimated population of the State, the number of births, marriages, and deaths, and the birth, marriage, and death rates per 1,000 of the population for six years, 1884 to 1889, inclusive. It appears that the birth-rate for 1889 is, with the exception of that for the year 1887, slightly higher than for any other year; the marriage-rate for 1889 is the highest that has ever been returned, while the death-rate is somewhat lower than for the previous year.

TABLE NO. 3.

Births, Marriages, and Deaths, with the Estimated Population and Rates, for 1884 *to* 1889, *inclusive.*

YEARS.	Population (estimated).	Births.	Marriages.	Deaths.	Birth-rate per 1,000.	Persons married to 1,000.	Death-rate per 1,000.
1884	358,845	6,247	3,292	6,194	17.40	18.34	17.26
1885	361,806	6,319	3,180	6,201	17.46	17.56	17.13
1886	364,767	6,657	3,324	6,426	18.24	18.22	17.61
1887	367,728	6,910	3,495	6,479	18.78	19.00	17.61
1888	370,689	6,443	3,379	6.854	17.38	18.22	18.48
1889	373,650	6,912	3,621	6,696	18.49	19.36	17.91
Average	366,247	6,581	3,382	6,475	17.96	18.44	17.66

Table No. 4 exhibits the birth-rate, death-rate, and marriage-rate of several foreign countries, together with that of Massachusetts, Rhode Island, and New Hampshire. Many of the rates cover a period of several years, as shown in the foot-note. The birth-rate of New

Hampshire is considerably lower than that reported from the countries named in the table; this is owing to causes which will be discussed under Births.

The death-rate of New Hampshire for the year compares favorably with that of the countries having the lowest rates of mortality even. The marriage-rate is exceeded only by Hungary and the State of Massachusetts. The figures in this table are compiled mostly from the registrar-general's report of England for 1887, and are from the most reliable sources.

TABLE NO. 4.

Rates of Births, Marriages, and Deaths, in Various Countries.

COUNTRIES.	Birth-rate.	Death-rate.	Excess of birth-rate over death-rate.	Marriage-rate.
New Hampshire *	18.3	17.7	.6	19.2
England and Wales †	31.4	18.8	12.6	14.2
Scotland †	31.2	18.7	12.5	12.5
Ireland ‡	23.2	18.3	4.9	8.7
Denmark †	32.0	18.3	13.7	14.0
Sweden §	29.8	16.6	13.2	12.8
Austria †	38.2	28.9	9.3	15.6
Prussia †	37.8	23.9	13.9	16.0
Netherlands †	33.7	19.7	14.0	14.0
France †	23.5	22.0	1.5	14.6
Hungary ‖	45.5	32.2	13.3	19.3
Switzerland *a*	27.5	20.4	7.1	13.7
Belgium †	29.4	19.3	10.1	14.2
Italy *b*	38.3	27.7	10.6	15.5
German Empire *c*	36.9	24.2	12.7	15.6
Russia *d*	49.4	35.7	13.7	18.8
Spain *d*	37.1	30.0	7.1	15.0
Norway *e*	30.9	16.1	14.8	13.1
Massachusetts *f*	26.8	20.6	6.3	19.3
Rhode Island *g*	24.2	19.9	4.3	18.0

* 1889†. 1887. ‡ For 17 years. § 1886. ‖ For 15 years. *a* For 13 years. *b* For 18 years. *c* For 9 years. *d* For 12 years. *e* For 10 years. *f* 1888. *g* For 7 years.

BIRTHS.

There were 6,912 births registered for the year 1889, a slightly larger number than hitherto reported in a single year. It should be distinctly understood that the birth records of New Hampshire are incomplete. The birth-rate is undoubtedly lower than in States where manufacturing interests are more largely represented; but there is no question that our birth-rate as registered is much lower than actually exists, which is occasioned by a neglect on the part of some whose duty it is to report births, and the indifference of a few local registrars. It is estimated that a rate of not far from 23 per 1,000 of the population represents very nearly the birth-rate of the State. A system that depends upon returns made by physicians and midwives to local registrars will never secure a correct registration of births. It is suggested that a system of compulsory birth registration be incorporated in the annual inventory blanks; by this method a very correct registration would be secured.

The birth-rate of the State per 1,000 of the estimated population for six years was returned as follows:

For 1884, 17.40; 1885, 17.46; 1886, 18.24; 1887, 18.78; 1888, 17.38; 1889, 18.49; average, 17.96.

The most defective registration undoubtedly exists in the cities. The following table shows the birth-rates for the several cities of the State, for the year 1889:

TABLE NO. 5.

Births in Cities for 1889, *with Rate per* 1,000.

CITIES.	Population of 1890.	Births.	Birth-rate per 1,000.
Portsmouth	9,830	161	16.37
Dover	12,786	248	19.39
Concord	17,018	335	19.68
Manchester	44,105	826	18.72
Nashua	19,278	566	29.35
Keene	7,461	130	17.42

It will be seen that the city of Nashua undoubtedly has a more accurate registration than any other city in the list, while the city of Manchester has the most defective, as it in all probability has the largest birth-rate in the State.

In the group of European countries, the birth-rate per 1,000 of the population is as follows: Russia, 49.40; Central Europe, 43.76; Southern Europe, 34.00; Northwestern Europe, 43.20. *

* Massachusetts Registration Report, 1888.

The countries having the highest and lowest birth-rates are as follows:

COUNTRIES.	Highest.	COUNTRIES.	Lowest.
Russia, 1867-78	49.4	Sweden, 1865-82	30.2
Croatia, 1874-80	45.3	Switzerland, 1870-82	30.2
Servia, 1879-83	43.6	Greece, 1865-82	28.4
Hungary, 1865-83	43.0	Ireland, 1865-83	26.4
Wurtemburg, 1865-83	42.6	France, 1870-82	25.4
Average	44.8	Average	29.0

Of the 6,912 births reported for the year, 3,543 were males, 3,293 females, and 76 sex not stated. A statement of the births by counties, 1880–1889, may be found in Table I. A record of births by towns, giving sex, rate per 1,000 of the population, and nativity of parents, may be found in Table III. The relative proportion of male to female births will be found in Table IV.

The percentage of American and foreign-born parents will be found in the following table:

TABLE NO. 6.

Percentage of American and Foreign Births, by Counties, 1889.

COUNTIES.	Parents.			Births with parentage not stated.
	American-born.	Foreign-born.	One foreign-born.	
Rockingham	66.22	17.28	12.23	32
Strafford	46.09	38.72	12.90	16
Belknap	52.13	28.65	14.93	14
Carroll	75.76	7.30	9.61	19
Merrimack	52.22	29.42	15.52	26
Hillsborough	34.21	47.68	13.15	95
Cheshire	62.63	21.44	10.80	28
Sullivan	70.73	14.63	11.14	10
Grafton	71.65	10.93	11.94	38
Coös	36.76	40.60	17.77	24
Total	51.43	30.96	13.23	302

This table gives the percentage of births of American-born parents, 51.43; foreign-born parents, 30.96; one parent foreign-born, 13.23; and in 302 births the parentage was not stated. When the complete census of 1890 can be obtained, this table will prove of interest to those studying the problems relating to the

movement and development of the population of the State. In 1888 53.08 per cent of the births were of American parentage; 29.61 per cent, foreign; 12.35 per cent, one parent foreign-born; and 313 births, parentage not stated. This shows a decrease in American parentage and an increase in foreign parentage. The census of 1880 gives the foreign population of the State as 10.45 per cent of the total, and it is probable that this rate will be increased by the census of 1890, nevertheless it still holds true that the birth-rate of the foreign population is much greater than among the native-born.

The number of twin births reported for the year was 67 — exactly the same as reported for 1888. A record of these births, by months and counties, may be found in Table V. Six colored births were reported for the year, as against eight for the previous year. A record of births, by sex, months, and counties, may be found in Table VI.

MARRIAGES.

The total number of marriages registered in New Hampshire during the year 1889 was 3,621, which is 242 more than in 1888, and 126 more than in any previous year. This indicates a marriage-rate of 9.47, or 18.94 persons to each 1,000 of the estimated population of 1889. The marriage-rates for the past six years, 1884 to 1889, inclusive, computed on the estimated population of the respective years, is as follows: For 1884, 9.17; 1885, 8.78; 1886, 9.11; 1887, 9.50; 1888, 9.11; 1889, 9.68; average, 9.22.

TABLE NO. 7.

Marriage-rates for 1882 *to* 1889, *inclusive.*

YEARS.	Marriages.	Persons married to 1,000 living (estimated).	Number living to one marriage.
1882	3,433	19.44	103
1883	3,495	19.68	102
1884	3,292	18.34	109
1885	3,180	17.56	114
1886	3,324	18.22	109
1887	3,495	19.00	105
1888	3,379	18.22	109
1889	3,621	19.36	103
Average	3,402	18.72	107

Table No. 7 exhibits the number of marriages returned annually from 1882 to 1889, inclusive, with the number of persons married to each 1,000 of the estimated living population; also the estimated number of living persons to each marriage. In 1889 out of each 50.50 persons of the estimated living population, one person married. New Hampshire has a higher marriage-rate than any of the following foreign countries (whose marriage-rate maintained for a series of years is given below), with the exception of Russia and Hungary, thus:

New Hampshire,	1882-1889, inclusive	. .	18.72
Massachusetts,	1855-1887, "	. .	18.87
Rhode Island,	1860-1888, "	. .	19.80

Hungary	20.60
Russia	18.80
England and Wales, 1861-80, inclusive . .	16.40
Scotland, 1861–1880, inclusive . . .	14.20
Ireland " " . . .	9.80
France " " . . .	15.80
Prussia " " . . .	17.20

The number of marriages in New Hampshire for the past eight years, 1882 to 1889, inclusive, by counties, is shown in Table 8.

TABLE NO. 8.

Marriages by Counties from 1882 *to* 1889, *inclusive.*

COUNTIES.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.
Rockingham	419	399	419	447	440	457	420	484
Strafford.....	428	425	415	388	418	420	416	377
Belknap	166	198	147	150	183	213	183	186
Carroll	159	175	171	182	177	149	163	176
Merrimack	364	432	344	361	345	421	405	423
Hillsborough.....	1,025	949	886	815	876	915	879	1,013
Cheshire.....	232	262	238	233	240	255	221	250
Sullivan.....	149	167	138	109	140	123	146	154
Grafton.....	319	339	332	327	318	328	322	343
Coös	172	149	202	168	187	214	224	215
Total.....	3,433	3,495	3,292	3,180	3,324	3,495	3,379	3,621

Hillsborough county returned a larger number of marriages than any other county, the number for 1889 being 1,013, the largest number returned by this county in any single year, except in 1882, when there were 1,025 mar-

riages. Rockingham county is next in order, with 484 marriages, the largest number ever returned by this county. Merrimack county is third in the list, with 423 marriages, which number has never been exceeded except in 1883, when there were 432 marriages in this county. Strafford county reported 377 marriages for the year 1889, which is the smallest number ever returned from this county; the largest number, 428, was reported in 1882. Grafton county reported 343 marriages, which is the largest number ever returned from that county. Cheshire county returned 250 marriages, which number was exceeded in 1887 and 1883. Coös county returned 215 marriages, as against 224 in 1888. Carroll county returned 176 marriages in 1889, which number was very slightly exceeded in 1885 and 1886. Sullivan county reported 154 marriages, which has never been exceeded, except in 1883.

TABLE NO. 9.

Marriage-rates for 1882 *to* 1889, *inclusive, according to Estimated Population of each Year, by Counties.*

COUNTIES.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.
Rockingham	8.51	8.09	8.49	9.04	8.89	9.22	8.45	9.72
Strafford	11.84	11.66	11.30	10.48	11.21	11.17	10.98	9.88
Belknap	9.01	10.61	7.78	7.84	9.45	10.87	9.23	9.27
Carroll	8.73	9.62	9.40	10.01	9.74	8.21	8.98	9.71
Merrimack	7.75	9.14	7.23	7.54	7.16	8.68	8.30	8.61
Hillsborough	12.95	11.73	10.72	9.65	10.17	10.41	9.80	11.08
Cheshire	8.01	9.02	8.01	7.97	8.18	8.66	7.48	8.43
Sullivan	8.28	9.27	7.74	6.14	7.93	7.00	8.35	8.86
Grafton	8.28	8.83	8.68	8.59	8.38	8.68	8.55	9.15
Coös	8.82	7.46	9.89	8.04	8.76	9.82	10.07	9.47
Average	9.72	9.84	9.17	8.78	9.11	9.50	9.11	9.68

The marriage-rates for the years 1882 to 1889, inclusive, are given by counties in Table No. 9, according to calculations based upon the estimated population for each year. The highest marriage-rate, as well as the largest number of marriages, is returned from Hillsborough county, 11.08 marriages per 1,000 of population. The other counties follow in the order given: Strafford, 9.88; Rockingham, 9.72; Carroll, 9.71; Coös, 9.47; Belknap, 9.27; Grafton, 9.15; Sullivan, 8.86; Merrimack, 8.61; Cheshire, 8.43.

The highest marriage-rate for the entire State, as calculated upon the estimated population of that year, was in 1883, when it reached 9.84 marriages per 1,000; while the lowest rate was in 1885, 8.78. The uniformity in the marriage-rate of the State for the years 1882 to 1889, inclusive, is noticeable.

TABLE NO. 10.

Marriages and Marriage-rates by Months and Quarters, from 1883 *to* 1889, *inclusive.**

MONTHS.	Marriages Registered.								Percentage of Marriages.							
	1883.	1884.	1885.	1886.	1887.	1888.	1889.	Quarters.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	Quarters.
January ...	359	270	254	252	303	284	283		10.38	8.25	8.02	7.61	8.74	8.45	7.87	
February ..	236	264	201	191	237	242	212	4,976	6.83	8.06	6.35	5.77	6.84	7.20	5.89	21.04
March	215	184	162	224	178	185	240		6.22	5.62	5.12	6.77	5.13	5.50	6.67	
April	230	231	274	212	250	259	255		6.65	7.05	8.65	6.40	7.21	7.71	7.09	
May.....	282	253	244	307	276	247	306	5,726	8.16	7.73	7.71	9.28	7.96	7.35	8.51	24.23
June	239	268	269	325	316	341	342		6.91	8.19	8.50	9.82	9.11	10.14	9.51	
July	233	242	200	223	259	205	270		6.74	7.39	6.32	6.74	7.47	6.10	7.51	
August	271	221	222	239	247	239	282	5,507	7.84	6.75	7.01	7.22	7.12	7.11	7.84	23.30
September.	270	324	311	315	298	315	321		7.81	9.90	9.82	9.52	8.59	9.37	8.92	
October....	350	332	320	343	376	377	351		10.12	10.14	10.11	10.36	10.84	11.22	9.76	
November .	423	386	374	388	427	381	409	7,424	12.24	11.79	11.81	11.72	12.31	11.34	11.37	31.43
December..	349	299	335	291	301	286	326		10.10	9.13	10.58	8.79	8.68	8.51	9.06	
Total ...	3,457	3,274	3,166	3,310	3,468	3,361	3,597	23,633	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

* Not including those with date not given.

Table No. 10 shows the number of marriages and marriage-rates, by months and quarters, from 1883 to 1889, inclusive. The largest number of marriages, by seasons, for the years included in the table, occurred in the fourth quarter, and the smallest number in the first quarter; 31.43 per cent of the marriages were solemnized in the fourth quarter of the year; 24.23 per cent in second quarter; 23.30 per cent in third quarter; and 21.04 per cent in first quarter. A larger number of marriages was returned for November than for any other month, while the smallest number occurred in March.

TABLE NO. 11.

Marriages for seven years, 1883 *to* 1889, *inclusive, by Ages.*

SEX.	Under 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 70.	70 to 80.	Over 80.	Not stated.
Males.....	1,202	8,631	6,300	2,728	1,435	818	609	454	330	481	172	12	613
Females....	6,461	8,823	3,767	1,584	933	560	385	254	151	156	24	1	686

Table No. 11 shows the marriages for seven years, 1883 to 1889, inclusive, by ages and sex. Under twenty years of age, 1,202 males were married, as against 6,461 females of the same age; between the ages of twenty and twenty-five the numbers are nearly equal, 8,631 males and 8,823 females; between the ages of twenty-five and thirty, as is the case in all subsequent age periods for the years mentioned, the males largely exceed the females, 6,300 males and 3,767 females; between thirty and thirty-five, 2,728 males and 1,584 females; between thirty-five and forty, 1,435 males and 933 females; between forty and forty-five, 818 males and 560 females; between forty-five and fifty, 609 males and 385 females; between fifty and fifty-five, 454 males and

254 females; between fifty-five and sixty, 330 males and 151 females; between sixty and seventy, 481 males and 156 females; between seventy and eighty, 172 males and 24 females; over eighty, 12 males and 1 female; age not stated, 613 males and 686 females.

TABLE NO. 12.

Marriages according to Nativity. — Percentages 1882 *to* 1889, *inclusive.*

YEARS.	Both American.	Both foreign.	Groom American.	Bride American.	Not stated.
1882	65.74	12.09	5.13	4.14	12.90
1883	66.15	12.62	5.38	4.18	11.67
1884	69.44	12.91	5.32	3.92	8.41
1885	69.75	11.57	4.97	4.84	8.87
1886	67.87	13.39	6.50	5.08	7.16
1887	65.72	15.79	6.07	5.49	6.93
1888	64.22	17.16	7.10	6.31	5.21
1889	64.32	17.04	7.40	6.55	4.69
Average	66.65	14.07	5.99	5.06	8.23

Table No 12 exhibits the percentage of marriages from 1882 to 1889, inclusive. This table shows that, for the eight years given, in 66.65 per cent of the marriages both parties were American-born; 14.07 per cent, both foreign-born; 5.99 per cent, husband American; 5.06 per cent, wife American; 8.23 per cent, nativity not stated. A study of this table, by years, shows that there has been a gradual increase in the percentage of marriages among the foreign-born population, also in those

marriages having one contracting party foreign-born, while there has, of course, been a corresponding decrease in the percentage of the American-born. It is also true that a very large proportion of the marriages with nativity not stated should be classed with the foreign-born, which would still further increase the percentage of marriages among this class.

TABLE NO. 13.

Proportion of American to Foreign Born Persons Married, for 1882 *to* 1889, *inclusive.**

YEARS.	American-born.	Foreign-born.
1882	80.80	19.20
1883	80.30	19.70
1884	80.86	19.14
1885	81.92	18.08
1886	79.34	20.66
1887	76.82	23.18
1888	74.82	25.18
1889	74.80	25.20
Average	78.71	21.29

* Excluding those with nativity not given.

Table No. 13 exhibits the relative proportion of American and foreign born persons married in this State from 1882 to 1889, inclusive. This table shows that the marriage-rate is much larger among the foreign-born population than among the American or native born. The census of 1880 gives the foreign population as 10.25 per cent of the total population of the State; but 21.29 per cent of the total marriages in the State, for the eight years given, were among the foreign-born population.

TABLE NO. 14.

Percentages of American and Foreign Born Persons Married, by Counties, for 1882 to 1889, inclusive.

YEARS.		State.	Rockingham.	Strafford.	Belknap.	Carroll.	Merrimack.	Hillsborough.	Cheshire.	Sullivan.	Grafton.	Coös.
1882	American	80.80	90.89	80.98	75.90	97.43	84.25	66.08	88.64	90.08	93.38	81.17
	Foreign	19.20	9.11	19.02	24.10	2.57	15.75	33.92	11.36	9.92	6.62	18.83
1883	American	80.30	89.63	82.05	82.78	94.22	84.17	62.84	89.57	96.92	89.63	75.76
	Foreign	19.70	10.37	17.95	17.22	5.78	15.83	37.16	10.43	3.08	10.37	24.24
1884	American	80.86	86.68	76.32	88.11	97.71	85.83	65.30	90.32	93.65	92.18	76.44
	Foreign	19.14	13.32	23.68	11.89	2.29	14.17	34.70	9.68	6.35	7.82	23.56
1885	American	81.92	86.95	81.25	83.58	97.26	87.09	67.52	90.05	91.33	89.63	76.60
	Foreign	18.08	13.05	18.75	16.42	2.74	12.91	32.48	9.95	8.67	10.37	23.40
1886	American	79.34	87.01	79.82	75.14	96.18	83.74	62.90	91.27	89.00	90.53	71.50
	Foreign	20.66	12.99	20.18	24.86	3.82	16.26	37.10	8.73	11.00	9.47	28.50
1887	American	76.82	87.15	75.70	78.71	93.88	80.29	60.59	82.98	93.97	88.50	66.42
	Foreign	23.18	12.85	24.30	21.29	6.12	19.71	39.41	17.02	6.03	11.50	33.58
1888	American	74.82	84.03	77.10	78.53	93.91	76.93	54.94	84.47	88.73	88.96	74.07
	Foreign	25.18	15.97	22.90	21.46	6.09	23.07	45.06	15.53	11.27	11.04	25.93
1889	American	74.80	84.85	72.41	82.56	93.39	79.90	56.96	85.99	90.00	88.84	65.17
	Foreign	25.20	15.15	27.59	17.44	6.61	20.10	43.04	14.01	10.00	11.16	34.83

Table No. 14 gives the percentages of American and foreign born persons married in this State during the eight years, 1882 to 1889, inclusive, by counties. This table presents a very interesting study relative to the nativity of persons married in the said counties. Comparing the marriages of 1889 with those of 1882, it will be seen that there has been a considerable increase in the percentage of foreign-born marriages in every county, with the single exception of Belknap, and a corresponding decrease in the percentage of native-born marriages. In Hillsborough county, foreign-born marriages increased from 33.92 per cent in 1882 to 43.04 per cent of the total number of marriages in 1889; in Coös county the increase was from 18.83 to 34.83 per cent; in Grafton, from 6.62 to 11.16 per cent; in Cheshire, from 11.36 to 14.01 per cent; in Merrimack, from 15.75 to 20.10 per cent; in Carroll, from 2.57 to 6.61 per cent; in Strafford, from 19.02 to 27.59 per cent; in Rockingham, from 9.11 to 15.15 per cent. In Sullivan county the percentage was increased slightly, 9.92 to 10.00 per cent in 1889. In Belknap county alone has the percentage of foreign-born marriages decreased, 24.10 per cent in 1882 and 17.44 per cent in 1889. In 1882 the relative percentages for the State were: American-born, 80.80 per cent; foreign-born, 19.20 per cent of the total. In 1889, American-born, 74.80 per cent; foreign-born, 25.20 per cent of the total.

Additional facts in relation to the marriage returns for the year 1889 may be found in Tables I., II., III., VII., VIII., IX., and X.

DIVORCES.

The law of New Hampshire says that a divorce from the bonds of matrimony shall be decreed in favor of the innocent party for either of the following causes:

1. Impotency of either party.

2. Adultery of either party.

3. Extreme cruelty of either party to the other.

4. Conviction of either party of crime punishable in this State with imprisonment for more than a year, and actual imprisonment under such conviction.

5. When either party has so treated the other as seriously to injure health.

6. When either party has so treated the other as seriously to endanger reason.

7. When either party has been absent three years together, and has not been heard of.

8. When either party is an habitual drunkard, and has been such for three years together.

9. When either party has joined any religious sect or society which professes to believe the relation of husband and wife unlawful, and refused to cohabit with the other for six months together.

10. When either party without sufficient cause, and without the consent of the other, has abandoned and refused for three years together to cohabit with the other.

11. When the husband has willingly absented himself from the wife for three years together, without making suitable provision for her support and maintenance.

12. When the wife of any citizen has willingly absented herself from her husband without his consent for three years together.

13. When the wife of any citizen has gone to reside beyond the limits of this State, and remained absent and separate from her husband ten years together without his consent and without returning to claim her marriage rights.

14. When the wife of any alien or citizen of another State, living separate, has resided in this State for three years together, her husband having left the United States with the intention of becoming a

citizen of some foreign country, and not having during that period come into this State and claimed his marital rights, and not having made suitable provision for his wife's support and maintenance.

During the year 1889, 368 divorces were decreed by the courts of New Hampshire, being 18 less than were decreed in the year 1888, and, with the exception of the year just mentioned, a larger number than in any previous year of which we have any divorce records.

Out of the 368 divorces decreed during the year, 123 were upon the charge of abandonment; 98 for extreme cruelty; 87 for adultery; 22 for habitual drunkenness; 13 for willing absence three years; 8 for extreme cruelty and habitual drunkenness; 4 for treatment injurious to health; 3 for impotency; 2 each for extreme cruelty and adultery, and absent three years; and 1 each for abandonment and adultery, conviction for crime and imprisonment, extreme cruelty, drunkenness and adultery, joining religious sect and refusal to cohabit, treatment injurious to health and extreme cruelty, and treatment injurious to health and to reason. Of the 368 libellants, 125 were males and 243 females.

The four leading causes for divorces are represented below in percentages to the total number of divorces decreed in the respective counties.

ABANDONMENT.

COUNTIES.	Percentage.	COUNTIES.	Percentage.
Cheshire	45.16	Hillsborough	40.23
Carroll	45.00	Merrimack	35.71
Strafford	44.44	Coös	32.00
Belknap	44.44	Sullivan	22.22
Rockingham	41.86	Grafton	17.94

EXTREME CRUELTY.

COUNTIES.	Percentage.	COUNTIES.	Percentage.
Coös	48.00	Hillsborough	22.98
Strafford	38.88	Belknap	22.22
Sullivan	38.88	Carroll	15.00
Grafton	35.89	Rockingham	13.95
Merrimack	30.95	Cheshire	9.67

ADULTERY.

COUNTIES.	Percentage.	COUNTIES.	Percentage.
Grafton	41.02	Merrimack	21.43
Carroll	35.00	Coös	20.00
Rockingham	34.88	Hillsborough	18.39
Belknap	29.62	Strafford	11.11
Sullivan	22.22	Cheshire	9.67

HABITUAL DRUNKENNESS.

COUNTIES.	Percentage.	COUNTIES.	Percentage.
Cheshire	12.90	Grafton	5.12
Hillsborough	8.04	Carroll	5.00
Rockingham	6.97	Merrimack	4.76
Strafford	5.55	Belknap	.....
Sullivan	5.55	Coös	.....

A detailed statement of all the causes for which divorces were decreed, tabulated by counties, may be found in Table XI.

During the past eight years, from 1882 to 1889, inclusive, there have been 2,654 divorces decreed in this State, of which 875 were on charge of abandonment; 785 for extreme cruelty; 603 for adultery; 210 for habitual drunkenness; 72 for absent three years; and 18 for willing absence three years. A tabulated statement, by counties, embracing this period may be found in Table XII., on pages 54 and 55.

TABLE NO. 15.

Divorces decreed from 1870 *to* 1889, *inclusive, by Counties.*

COUNTIES.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885	1886.	1887.	1888.	1889.
Rockingham	19	20	29	34	41	23	37	18	30	30	44	30	23	21	28	25	40	41	53	43
Strafford	12	6	24	27	25	17	20	29	29	34	58	42	36	53	32	28	46	24	41	36
Belknap	....	7	7	13	12	10	18	16	16	16	22	17	14	15	19	20	24	25	26	27
Carroll	4	1	1	9	9	4	10	13	19	13	11	19	9	7	14	20	12	12	22	20
Merrimack	15	27	32	13	51	37	40	23	22	36	41	25	49	49	48	35	46	48	49	42
Hillsborough	64	37	58	51	77	75	65	73	61	69	83	87	90	74	93	86	110	78	82	87
Cheshire	12	19	19	16	15	22	21	17	18	22	31	21	34	25	30	25	32	26	29	31
Sullivan	6	6	10	16	17	13	26	9	10	8	9	22	17	12	11	20	25	20	26	18
Grafton	13	21	15	29	22	20	20	29	17	27	25	37	27	14	28	22	30	35	40	39
Coös	4	5	2	4	12	11	9	10	11	10	15	7	15	3	12	10	17	16	18	25
Total	149	149	197	212	281	232	266	237	233	265	339	307	314	273	315	291	382	325	386	368

Table No. 15 shows the number of divorces decreed from 1870 to 1889, inclusive, by counties; it will be seen by this table that for the past nineteen years there has been, with a few exceptions, a yearly increase in the number of divorces granted. This increase is in a ratio very much exceeding that of the increase of the population of the State; between 1870 and 1880, the number was more than doubled; between 1880 and 1889, the increase has not been so marked. The number returned in 1888, 386, was the largest ever reported.

TABLE NO. 16.

Ratio of Divorces to Marriages from 1882 *to* 1889, *inclusive.*

YEARS.	Number of marriages.	Marriage-rate per 1,000.	Number of divorces.	Ratio of divorces to marriages.
1882	3,433	19.44	314	1 to 10.93
1883	3,495	19.68	273	1 to 12.80
1884	3,292	18.34	315	1 to 10.45
1885	3,180	17.56	291	1 to 10.92
1886	3,324	18.22	382	1 to 8.70
1887	3,495	19.00	325	1 to 10.75
1888	3,379	18.22	386	1 to 8.75
1889	3,621	19.36	368	1 to 9.83
Total	27,219	18.72	2,654	1 to 10.25

Table No. 16 shows the ratio of divorces to marriages from 1882 to 1889, inclusive. The ratio for the total of these years is one divorce to 10.25 marriages.

TABLE NO. 17.

Ratio of Divorces to Marriages, by Counties, for 1889.

COUNTIES.	Number of marriages.	Number of divorces.	Ratio of divorces to marriages.
Rockingham	484	43	1 to 11.25
Strafford	377	36	1 to 10.47
Belknap	186	27	1 to 6.88
Carroll	176	20	1 to 8.80
Merrimack	423	42	1 to 10.07
Hillsborough	1,013	87	1 to 11.64
Cheshire	250	31	1 to 8.06
Sullivan	154	18	1 to 8.55
Grafton	343	39	1 to 8.79
Coös	215	25	1 to 8.60
Total	3,621	368	1 to 9.83

Table No. 17 shows the ratio of divorces to marriages, by counties, for 1889. Hillsborough makes the best showing, with a ratio of one divorce to every 11.64 marriages, while Belknap stands at the foot with a ratio of one divorce to every 6.88 marriages. In Massachusetts, the ratio of divorces to marriages for the twenty years ending 1887, was one divorce to every 33 marriages; in Rhode Island during the ten years from 1879 to 1888, inclusive, the ratio was one to every 10.60 marriages.

TABLE NO. 18.

Ratio of total number of Divorces to total number of Marriages, by Counties, from 1882 *to* 1889, *inclusive.*

COUNTIES.	Number of marriages.	Number of divorces.	Ratio of divorces to marriages.
Rockingham	3,485	274	1 to 12.71
Strafford	3,287	296	1 to 11.10
Belknap	1,426	170	1 to 8.03
Carroll	1,352	116	1 to 11.65
Merrimack	3,095	366	1 to 8.45
Hillsborough	7,358	700	1 to 10.51
Cheshire	1,931	232	1 to 8.32
Sullivan	1,126	149	1 to 7.55
Grafton	2,628	235	1 to 11.18
Coös	1,531	116	1 to 13.19
Total	27,219	2,654	1 to 10.25

Table No. 18 shows the number of divorces to total number of marriages, by counties, from 1882 to 1889, inclusive; it will be seen by this table that the ratio of divorces to marriages in this State for the past eight years is one to 10.25 marriages; the lowest ratio for that period was in Coös county, being one divorce to every 13.19 marriages, while the highest ratio for the same period was in Belknap county, which was one to 8.03.

The record of divorces as presented in this report is correct, inasmuch as the facts are taken from the court records; the law directs that the clerks of the several

courts make a return of the number of divorces decreed at each term of court, with cause, and number and sex of libellants, but beyond this, no facts are reported to the registrar. It is suggested that an additional source of information concerning this subject might be secured if the law required the clerks to make similar returns of the unsuccessful cases, that is, the cause, sex of libellants, etc., with the reason why the libels were dismissed, and also give in all the returns, the length of time that the libellants have been married, with nationality, etc.

DEATHS.

The whole number of deaths returned for the year 1889 was 6,696, which was 158 more than were returned in 1888, and 221 more than the average number for the past six years. The largest mortality report for the past six years was in 1888, the total number being 6,854, which is 379 greater than the average of these years. The number of deaths reported from 1884 to 1889, inclusive, with the percentages of deaths to each 1,000 of the estimated population, is shown in Table No. 19; by estimated population, we mean the population of each year figured upon the census of 1880 and that of 1890, as shown in Table No. 3.

TABLE NO. 19.

Deaths and Death-rates from 1884 *to* 1889, *inclusive.*

YEARS.	Deaths registered.	Deaths to 1,000 of estimated population.
1884	6,194	17.26
1885	6,201	17.13
1886	6,426	17.61
1887	6,479	17.61
1888	6,854	18.48
1889	6,696	17.91
Average	6,475	17.66

The figures given in Table No. 19 show a very uniform mortality rate for the State with the exception of the year 1888, the average for the period being 17.66 to 1,000 of the population. We believe that the figures are as reliable as can be obtained under any existing system of registration, and they show that the mortality rate of New Hampshire compares favorably with that of the most healthful States in the Union that have a system of registration, or of which we have any statistics. For the purpose of comparison, the mortality rates of several countries are herewith given.

The average death-rate of Europe for nineteen years (1865–1883) was 28.1; for Europe, excluding Russia, it was 25.8, and for Russia alone, 35.7. By sections, the following were the rates for the same period:

Eastern Europe (Russia), 35.7; Central Europe, 28.3; Southern Europe, 25.6; Northwestern Europe, 20.5.

The highest and lowest rates were as follows:

COUNTRIES.	Highest.	COUNTRIES.	Lowest.
Croatia, 1874-80.....	38.7	Greece, 1865-82.....	20.8
Hungary, 1865-82.....	38.2	Denmark, 1865-82.....	19.7
Russia, 1867-78.....	35.7	Sweden, 1865-82.....	18.9
Wurtemberg, 1865-82.....	31.5	Ireland, 1865-83.....	17.8
Austria, 1865-83.....	31.0	Norway, 1865-83.....	17.2

In some of these countries, as in Croatia and Hungary, not only a high birth-rate, but also the invasion of war and of cholera and other diseases, appears to have contributed to increase the mortality rate.*

In Massachusetts, the mortality rate for thirty years ending 1888, was 19.48 per 1,000 of the population.

* Massachusetts Registration Report, 1887.

TABLE NO. 20.

Deaths and Death-rates, by Counties, from 1884 to 1889, inclusive, figured on Estimated Population.

COUNTIES.	1884.		1885.		1886.		1887.		1888.		1889.	
	Deaths.	Death-rates.	Deaths.	Death-rates.	Deaths.	Death-rates.	Deaths.	Death-rates.	Deaths.	Death-rates.	Deaths.	Death-rates.
Rockingham.....	873	17.69	911	18.43	963	19.46	876	17.67	896	18.05	875	17.61
Strafford.....	627	17.07	619	16.73	609	16.33	673	17.91	688	18.17	691	18.11
Belknap.....	285	15.09	289	15.12	362	18.71	369	18.84	392	19.78	389	19.40
Carroll.....	333	18.31	269	14.80	303	16.68	294	16.20	328	18.08	298	16.44
Merrimack.....	736	15.48	796	16.63	833	17.29	835	17.22	920	18.86	891	18.15
Hillsborough. ...	1,655	20.02	1,701	20.15	1,681	19.51	1,697	19.38	1,846	20.59	1,740	19.04
Cheshire.....	497	17.06	494	16.90	475	16.19	482	16.39	488	16.52	525	17.72
Sullivan.....	273	15.32	284	16.02	328	18.59	283	16.12	327	18.72	314	18.06
Grafton.....	652	17.06	611	16.05	616	16.24	602	15.93	655	17.35	625	16.67
Coös	263	12.88	227	10.87	256	12.00	368	16.89	314	14.11	348	15.32
Total	6,194	17.26	6,201	17.13	6,426	17.61	6,479	17.61	6,854	18.48	6,696	17.91

Table No. 20 shows the number of deaths and the death-rates, by counties, to estimated population for 1884 to 1889, inclusive. The table shows that the highest average death-rate, by counties, for the period embraced, occurred in Hillsborough county, while the lowest rate is reported from Coös county. For the year 1889, the highest death-rate, 19.40, was reported from Belknap county, and the lowest, 15.32, from Coös county; Hillsborough returned a rate of 19.04; Merrimack, 18.15; Strafford, 18.11; Sullivan, 18.06; Cheshire, 17.72; Rockingham, 17.61; Grafton, 16.67; and Carroll, 16.44; with an average for the State of 17.91.

TABLE NO. 21.

Percentages of Deaths, by Quarters, from 1884 *to* 1889, *inclusive.*

YEARS.	Percentages of deaths for quarters, ending with			
	March.	June.	Septemb'r.	December.
1884	23.23	23.40	26.63	26.74
1885	27.27	26.66	24.32	21.75
1886	23.75	23.27	28.90	24.08
1887	24.56	24.02	27.77	23.65
1888	25.94	23.72	26.82	23.52
1889	23.70	24.16	27.38	24.76
Average	24.74	24.21	26.97	24.08

Table No. 21 shows the percentages of deaths, by quarters, from 1884 to 1889, inclusive. It will be seen by this table that the greatest average mortality occurs in the quarter embracing July, August, and September, being 26.97 per cent of the total average mortality. The per-

centages for the remaining quarters are nearly uniform, being as follows: For the first quarter, 24.74; for the second quarter, 24.21; and for the fourth quarter, 24.08. In the year 1889, the mortality rate for the quarter embracing July, August, and September is somewhat larger than the average for that period of the six years given in the table, it being 27.38 per cent of the total mortality of the year. The lowest mortality of the year was in the first quarter and was 23.70 per cent, the second quarter was 24.16 per cent, and the fourth quarter was 24.76 per cent of the total mortality.

TABLE NO. 22.

Mortality of Males and Females compared, 1884 *to* 1889, *inclusive.*

YEARS.	Male decedents.	Female decedents.	Male decedents to 100 female decedents.	Death-rate of males to 1,000 male population.*	Death-rate of females to 1,000 of female populat'n.*
1884.....	30.34	31.22	97.18	17.79	17.69
1885.....	29.48	31.94	92.29	17.28	18.09
1886.....	31.55	32.12	98.20	18.50	18.20
1887.....	31.74	32.67	97.15	18.61	18.51
1888.....	34.19	33.82	101.09	20.04	19.16
1889.....	32.53	33.89	95.98	19.07	19.20
Average....	31.63	32.61	96.98	18.55	18.47

* To population of 1880.

Table No. 22 represents the mortality of males and females compared for the years 1884 to 1889, inclusive.

It shows that the death-rate of males among the total male population is slightly in excess of that of the females to the female population, except in 1885 and 1889, when the reverse is true. The average percentage of male decedents to female decedents for the six years given is 96.98; for the year 1889, 95.98.

TABLE NO. 23.

Deaths at Different Periods, compared with the Number Living at the Same Period, 1889.*

	Deaths, 1889.	Persons living at same ages, census of 1880.	Death-rate per 1,000.
Under 1 year	1,014	6,141	165.14
Under 5 years	1,530	30,573	50.04
20 to 30 years	439	63,252	6.94
All others	4,439	253,166	17.53
All ages	6,408	346,991	18.46

* Excluding still births and premature births.

Table No. 23 exhibits the number of deaths at different age periods compared with the number of persons living at the same age periods, for the year 1889. This table shows a death-rate under one year of age, of 165.14 to each 1,000 living of the same age; under five years, a rate of 50.04; between 20 and 30 years, a rate of 6.94; all others, 17.53.

TABLE NO. 24.

Deaths at Age Periods by Percentages, for 1883 *to* 1889, *inclusive.*

YEARS.	Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	Over 60.	Unknown.
1883...	14.13	7.58	2.56	5.55	8.58	6.73	6.22	7.64	37.93	3.08
1884...	16.22	7.36	2.61	5.30	7.93	6.26	6.33	7.75	38.38	1.86
1885...	15.98	7.14	2.11	4.42	7.50	6.71	6.71	7.76	40.09	1.58
1886...	16.89	7.70	2.86	4.82	7.73	6.55	6.12	7.47	38.86	1.00
1887...	17.64	7.26	2.05	4.89	6.96	6.25	6.56	7.72	39.70	.97
1888...	19.23	7.63	2.04	4.93	7.07	6.00	5.53	7.57	38.72	1.18
1889...	19.44	7.71	2.66	4.64	6.56	6.15	5.93	7.63	38.40	.88
Av'ge.	17.07	7.48	2.41	4.94	7.47	6.39	6.20	7.65	38.79	1.51

Table No. 24 shows the percentages of deaths at different ages to the total mortality, from 1883 to 1889, inclusive. It will be seen by this table that for the period of years given, 17.07 per cent of the decedents were under one year of age; 7.48 were between 1 and 5; 2.41 were between 5 and 10; 4.94 were between 10 and 20; 7.47 were between 20 and 30; 6.39 were between 30 and 40; 6.20 were between 40 and 50; 7.65 were between 50 and 60; 38.79 were over 60 years of age.

TABLE NO. 25.

Deaths by Ages and Sex, from 1884 *to* 1889, *inclusive.**

YEARS.	Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.
1884....Males	460	243	72	136	224	168	180	245	322	502	292	30	1	60
Females	353	212	90	192	266	220	211	235	336	444	379	70	...	51
Not stated	3	1	...	...	1	...	1	...	1	...	...	...	...	4
Total	816	456	162	328	491	388	392	480	659	946	671	100	1	115
1885....Males	416	225	62	109	190	181	190	252	394	478	284	32	1	43
Females	371	217	68	164	275	235	226	225	355	463	398	74	2	50
Not stated	18	1	1	1	...	...	...	4	2	3	...	...	...	5
Total	805	443	131	274	465	416	416	481	751	944	682	106	3	98
1886....Males	487	273	94	132	205	188	198	228	368	499	317	42	2	33
Females	385	221	90	178	292	233	195	252	339	447	397	83	3	28
Not stated	19	1	...	...	...	...	...	...	...	...	...	...	...	3
Total	891	495	184	310	497	421	393	480	707	946	714	125	5	64
1887....Males	490	231	71	142	196	184	186	254	377	512	336	45	1	34
Females	416	239	61	175	255	221	239	246	358	494	350	93	6	28
Not stated	8	...	1	...	...	...	...	...	...	...	...	...	...	1
Total	914	470	133	317	451	405	425	500	735	1,006	686	138	7	63

* Excluding still births and premature births.

TABLE NO. 25. — *Continued.*

YEARS.	Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.
1888....Males	588	280	75	144	213	177	180	257	392	507	377	47	1	57
Females	459	243	65	194	271	241	199	262	375	511	360	79	5	23
Not stated	13	...	...	...	...	...	...	...	...	...	...	...	...	1
Total	1,060	523	140	338	484	418	379	519	767	1,018	737	126	6	81
1889....Males	536	269	90	131	187	186	175	241	381	492	342	43	...	29
Females	470	245	88	179	251	226	222	270	398	471	366	75	3	29
Not stated	8	2	...	1	1	...	...	...	...	...	...	...	...	1
Total	1,014	516	178	311	439	412	397	511	779	963	708	118	3	59
Grand total	5,500	2,903	928	1,878	2,827	2,460	2,402	2,971	4,398	5,823	4,198	713	25	480

TABLE NO. 26.

Percentages of Deaths by Ages and Sex to Total Mortality, from 1884 *to* 1889, *inclusive.**

YEARS.	Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.
1884...Males.....	16.00	8.45	2.51	4.73	7.79	5.84	6.26	8.52	11.20	17.46	10.16	1.04	.04
Females	11.74	7.05	2.99	6.38	8.84	7.31	7.02	7.81	11.17	14.76	12.60	2.33	...
Total.....	13.82	7.73	2.75	5.57	8.33	6.60	6.65	8.16	11.18	16.08	11.41	1.70	.02
1885...Males.....	14.78	8.00	2.20	3.87	6.75	6.43	6.75	8.96	14.00	16.99	10.09	1.14	.04
Females.....	12.07	7.06	2.21	5.34	8.95	7.65	7.35	7.32	11.55	15.07	12.95	2.41	.07
Total.....	13.37	7.51	2.21	4.64	7.95	7.07	7.07	8.10	12.72	15.98	11.58	1.80	.05
1886...Males.....	16.06	9.00	3.10	4.35	6.75	6.20	6.53	7.52	12.13	16.45	10.45	1.39	.07
Females	12.36	7.10	2.89	5.71	9.37	7.48	6.26	8.09	10.88	14.35	12.74	2.67	.10
Total.....	14.18	8.04	2.99	5.04	8.08	6.85	6.39	7.81	11.50	15.39	11.62	2.03	.08
1887...Males.....	16.20	7.64	2.35	4.69	6.48	6.08	6.15	8.40	12.46	16.92	11.11	1.49	.03
Females	13.19	7.58	1.94	5.55	8.09	7.01	7.58	7.80	11.35	15.67	11.10	2.95	.19
Total.....	14.67	7.61	2.14	5.13	7.30	6.56	6.88	8.09	11.90	16.28	11.10	2.23	.11
1888...Males.....	18.16	8.65	2.31	4.45	6.58	5.47	5.56	7.94	12.10	15.66	11.64	1.45	.03
Females	14.06	7.45	1.99	5.94	8.30	7.38	6.10	8.03	11.49	15.66	11.03	2.42	.15
Total.....	16.10	8.04	2.15	5.20	7.44	6.43	5.83	7.98	11.80	15.66	11.34	1.94	.09
1889...Males	17.44	8.75	2.93	4.26	6.09	6.05	5.70	7.84	12.40	16.01	11.13	1.40	....
Females	14.40	7.51	2.70	5.48	7.69	6.92	6.80	8.27	12.20	14.43	11.21	2.30	.09
Total.....	15.88	8.11	2.81	4.89	6.91	6.50	6.27	8.06	12.29	15.20	11.17	1.86	.05
Grand total	14.70	7.85	2.51	5.08	7.65	6.66	6.50	8.03	11.90	15.76	11.36	1.93	.07

* Excluding those with age and sex not stated, and premature and still births.

Table No. 25 gives the number of deaths by age periods and sex, from 1884 to 1889, inclusive.

Table No. 26 shows the percentages of deaths by age periods and sex to total mortality, from 1884 to 1889, inclusive. Tables 25 and 26 are instructive in stating the mortality by ages for the past six years according to sex of the decedents. The percentages given in Table No. 26 vary slightly from those in Table No. 24, by reason of excluding from the former table those decedents whose age or sex was not stated, which occurs largely among those under one year of age, and also excluding the still and premature births. This table shows the greatest death-rate to total mortality for the past six years to have occurred between the ages of 70 and 80, it being 15.76 per cent; this is followed by 14.70 per cent, under one year of age; 11.90 per cent, between 60 and 70; 11.36 per cent, between 80 and 90; 8.03 per cent, between 50 and 60; 7.85 per cent, between 1 and 5; 7.65 per cent, between 20 and 30; 6.66 per cent, between 30 and 40; 6.50 per cent, between 40 and 50; 5.08 per cent, between 10 and 20; 2.51 per cent, between 5 and 10; 1.93 per cent, between 90 and 100; and .07 per cent, over 100 years of age, to total mortality.

There is nothing shown more forcibly in Tables 23, 24, 25, and 26, than the large infant mortality which occurs annually in the State; nearly one fourth, or 24.55 per cent, of all the deaths occurring in the past seven years have been in persons under five years of age, and the mortality among this class, as shown by Table No. 24, has been steadily increasing. In 1883, the percentage of deaths of persons under five years of age, was 21.71; in 1884, 23.58; in 1885, 23.12; in 1886, 24.59; in 1887, 24.90; in 1888, 26.86; in 1889, 27.15.

TABLE NO. 27.

Deaths of Children under Five Years of Age, by Seasons, 1889.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Months.....	85	97	89	113	80	141	169	240	199	118	97	100
Quarters.....		271			334			608			315	
Percentages...		17.73			21.86			39.79			20.62	
Half-years			605						923			
Percentages...			39.59						60.41			
Total deaths...					1,528							
					100.00							

Table No. 27 shows the deaths of children under five years of age by months and seasons, and the percentages of deaths by quarters and half-years, for the year 1889. The mortality by quarters is as follows: January, February, and March, 271; April, May, and June, 334; July, August, and September, 608; October, November, and December, 315. These figures give a percentage for the first quarter of 17.73; for the second quarter, 21.86; for the third quarter, 39.79; for the fourth quarter, 20.62. There were 605 deaths during the first half-year, and 923 the second half-year; 39.59 per cent the first half-year, and 60.41 the second half-year; the total number of children under five years of age that died during the year was 1,528. August was the most fatal month, with a mortality of 240, followed by September with 199; July, 169; June, 141; October, 118; April, 113; December, 100; February and November, each 97; March, 89; January, 85; and May, 80.

TABLE NO. 28.

Deaths by Seasons, 1889.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Months.....	493	479	545	553	491	503	556	641	556	579	484	522
Quarters.....		1,517			1,547			1,753			1,585	
Percentages...		23.70			24.16			27.38			24.76	
Half-years.....			3,064						3,338			
Percentages...			47.86						52.14			
Total deaths...						6,402						
						100.00						

Table No. 28 gives the total deaths for the year 1889, by months and seasons, with percentages for the quarters and half-years. Of the 6,402 decedents reported for the year, 1,517 died in the first quarter, 1,547 in the second quarter, 1,753 in the third quarter, and 1,585 in the fourth quarter. Considered by percentages, 23.70 per cent died in the first quarter, 24.16 in the second quarter, 27.38 in the third quarter, and 24.76 in the fourth quarter of the year. Dividing the year into halves, 3,064, or 47.86 per cent, died in the first half, and 3,338, or 52.14 per cent, in the second half. The increased percentage of July, August, and September over the other quarters is due to the mortality from cholera morbus and other infantile diseases incident to those months.

TABLE NO. 29.

Nativity of Persons Deceased for 1889, *by Counties.*

COUNTIES.	Total deaths.*	Native-born.		Foreign-born.	
		Deaths.	Percentages.	Deaths.	Percentages.
Rockingham	875	703	91.66	64	8.34
Strafford	691	543	83.80	105	16.20
Belknap	389	319	92.46	26	7.54
Carroll	298	274	98.92	3	1.08
Merrimack	891	755	91.07	74	8.93
Hillsborough	1,740	1,333	80.79	317	19.21
Cheshire	525	422	91.14	41	8.86
Sullivan	314	266	91.10	26	8.90
Grafton	625	523	94.58	30	5.42
Coös	348	245	83.62	48	16.38
Total	6,696	5,383	88.00	734	12.00

* Including those whose nativity was not recorded. In the calculations of percentages, the rates are not given to the *total* reported deaths, but only to the total of those cases where the nativity was stated.

Table No. 29 gives the nativity of persons who died during the year 1889, by counties, with percentages for each county. This table shows the highest percentage of foreign-born decedents to have been in Hillsborough county, which was 19.21 per cent, followed by Coös county with 16.38 per cent; Strafford, with 16.20 per cent; Merrimack, with 8.93 per cent; Sullivan, with 8.90 per cent; Cheshire, with 8.86 per cent; Rocking-

ham, with 8.34 per cent; Belknap, with 7.54 per cent; Grafton, with 5.42 per cent; and Carroll, with 1.08; for the entire State, the percentage was 12. The difference between the percentages of the nativity of the several counties is largely accounted for by the industries and occupations of those counties, and probably follows approximately the ratio of the foreign-born to the native-born population of the counties.

TABLE NO. 30.

Nativity of Persons Deceased from 1884 *to* 1889, *inclusive.*

YEARS.	Total deaths.*	Native-born.		Foreign-born.	
		Deaths.	Percentages.	Deaths.	Percentages.
1884	6,194	4,868	89.01	601	10.99
1885	6,201	4,847	89.35	578	10.65
1886	6,426	4,989	88.52	647	11.48
1887	6,479	5,131	88.03	698	11.97
1888	6,854	5,449	87.53	776	12.47
1889	6,696	5,383	88.00	734	12.00

* Including those whose nativity was not recorded. In the calculations of percentages, the ratios are not given to the *total* reported deaths, but only to the total of those cases where the nativity was stated.

Table No. 30 shows the nativity of the persons deceased from 1884 to 1889, inclusive, with percentages for each year. This table shows a decrease in the percentages for the years given of the native-born, and a corresponding increase in the percentages of the foreign-born decedents; and these percentages would probably be somewhat larger if the unreported nativities were returned, as doubtless the greater part of them belong to the foreign-born population.

TABLE NO. 31.

Deaths in 1889, *Aged One Hundred Years, or more.*

Date of death.	NAME.	Age.			Place of death.	Birthplace.	Single, married, or widowed.
		Years.	Months.	Days.			
June 4	Mary Kenney	106	....	.....	Dover	Ireland	Widowed.
June 6	Deborah Ewins	100	5	6	Grafton	Greenfield, N. H.	Widowed.
December 30	Abiah Coburn	100	2	19	Salem	Salem, N. H	Widowed.

In Table No. 31 are given the names of the persons reported to have arrived at 100 years, or more, who died during the year 1889.

CAUSES OF DEATH.

Out of the total 6,696 deaths for the year 1889, there were 284 with the cause of death not stated, or about 4.24 per cent of the total mortality. There were several reasons why these 284 causes of death were not reported. In some instances, a meaningless cause was given or one that would not admit of classification. Again it was due to a failure of the local registrars to read the cause of death on the physician's certificate, and again it was owing to carelessness in making proper returns by the local registrars. However, this number of unreported causes is so small that it does not materially affect the calculations in the various tables. It may be remarked that within the past few years since returns have been required from the physicians, the causes of death have been much more accurately given than heretofore, hence it is possible to make a more accurate classification of them than formerly.

TABLE NO. 32.

Causes of Death, by Classes, 1884 *to* 1889, *inclusive.*

	1884.	1885.	1886.	1887.	1888.	1889.
I. — Zymotic diseases.....	907	890	1,095	1,073	1,097	1,172
II. — Constitutional diseases .	1,276	1,271	1,284	1,222	1,200	1,114
III. — Local diseases.....	2,594	2,637	2,610	2,731	2,994	2,852
IV. — Developmental diseases.	857	848	948	952	1,016	1,041
V. — Violent deaths.....	201	225	206	218	234	233

Table No. 32 gives the causes of death, by classes, from 1884 to 1889, inclusive.

TABLE NO. 33.

Percentage of Causes of Death, by Classes, 1884 *to* 1889, *inclusive.**

YEARS.	Classes.				
	Zymotic.	Constitutional.	Local.	Developmental.	Violent deaths.
1884	15.9	22.4	45.7	12.3	3.5
1885	13.9	22.2	46.0	12.2	3.6
1886	18.2	21.4	43.4	13.4	3.4
1887	17.9	20.4	45.7	12.1	3.6
1888	17.4	19.1	47.6	12.0	3.7
1889	19.1	18.2	46.5	12.3	3.8
Average	17.1	20.6	45.8	12.4	3.6

* Excluding deaths from unspecified causes and still births.

Table No. 33 gives the] percentage of causes of death by classes for the same years as Table No. 32. It will be seen by Table No. 33 that the percentage of deaths under the zymotic class was larger for the year 1889 than that returned for any other year. In 1884 it was 15.9 per cent of the total mortality; in 1885 it was 13.9; in 1886 it was 18.2; in 1887 it was 17.9; in 1888 it was 17.4; and in 1889 it was 19.1. The average percentage in this class for the past six years was 17.1, the rate for the year 1889 being 2 per cent higher than the average for the six years.

Under constitutional diseases, there has been a corresponding decrease. The highest rate was 22.4 per cent,

in 1884; in 1885 it was 22.2 per cent; in 1886 it was 21.4; in 1887 it was 20.4; in 1888 it was 19.1; and in 1889 it was 18.2, the lowest rate for the six years given.

In the local class the variation has not been so great. In 1884, 45.7 per cent of the total mortality was reported as local diseases; in 1885, 46.0 per cent; in 1886, 43.4 per cent; in 1887, 45.7 per cent; in 1888, 47.6 per cent; in 1889, 46.5 per cent. The average for the six years is 45.8 per cent.

Deaths from developmental diseases have varied but slightly in proportion to the total mortality during the period under consideration. The highest percentage was 13.4 in 1886, and the lowest, 12.0, in 1888, while the average for the six years is 12.4.

The classification of violent deaths has been nearly uniform during the six years, being for each year a fraction over 3 per cent of the total mortality, and averaging 3.6 per cent.

TABLE NO. 34.

Causes of Death, by Classes and Counties, 1889.

COUNTIES.	Zymotic.		Constitutional.		Local.		Developmental.		Violent.		Unspecified.		Total.
	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	
Rockingham	123	14.05	161	18.40	384	43.88	147	16.80	27	3.08	33	3.77	875
Strafford	178	25.76	121	17.51	239	34.58	103	14.90	19	2.75	31	4.48	691
Belknap	53	13.62	71	18.25	180	46.27	55	14.14	14	3.60	16	4.11	389
Carroll	36	12.08	50	16.77	156	53.35	32	10.73	11	3.69	13	4.36	298
Merrimack	107	12.01	154	17.28	432	48.48	137	15.37	32	3.59	29	3.25	891
Hillsborough	379	21.78	270	15.51	645	37.06	293	16.83	55	3.16	98	5.63	1,740
Cheshire	101	19.23	85	16.19	218	41.52	82	15.62	19	3.62	20	3.81	525
Sullivan	36	11.46	52	16.56	161	51.27	43	13.69	14	4.45	8	2.56	314
Grafton	73	11.68	111	17.76	312	49.92	84	13.44	25	4.00	20	3.20	625
Coös	86	24.71	39	11.20	125	35.92	65	18.67	17	4.88	16	4.59	348
Total	1,172	17.50	1,114	16.63	2,852	42.59	1,041	15.54	233	3.47	284	4.24	6,696

Table No. 34 represents the causes of death by classes and counties. It is to be remembered that Table No. 33 excludes deaths from unspecified causes and still births, while in Table No. 34 these are included, hence the slight difference in the percentages of the classes, those in Table No. 33 being computed upon the total mortality with the deaths from unspecified causes and still births excluded.

In the zymotic class the variation in the several counties is very marked, the lowest rate being in Sullivan county, 11.46 per cent; the highest is in Strafford county, and is 25.76; followed by 24.71 per cent in Coös, 21.78 in Hillsborough, 19.23 in Cheshire, 14.05 in Rockingham, 13.62 in Belknap, 12.08 in Carroll, 12.01 in Merrimack, and 11.68 in Grafton. The percentage for the State is 17.50 per cent of the total mortality.

Under constitutional diseases the percentages differ somewhat in the several counties. The lowest rate is 11.20, in Coös county, and the highest, 18.40, in Rockingham county; the other percentages are 18.25 in Belknap, 17.86 in Grafton, 17.51 in Strafford, 17.28 in Merrimack, 16.77 in Carroll, 16.56 in Sullivan, 16.19 in Cheshire, and 15.51 in Hillsborough county. The rate for the State is 16.63 per cent.

Under local diseases, the highest rate, 53.35, is from Carroll county, and the lowest, 34.58, is from Strafford; Sullivan county returns a rate of 51.27 per cent; Grafton county, 49.92 per cent; Merrimack, 48.48 per cent; Belknap, 46.27 per cent; Rockingham, 43.88 per cent; Cheshire, 41.52 per cent; Hillsborough, 37.06 per cent; Coös, 35.92 per cent; for the State, 42.59 per cent.

In the developmental class the percentages are more uniform, the highest being 18.67, in Coös county, and the lowest, 10.73, in Carroll county; for the State, 15.54 per cent.

Under the class of violent deaths were registered 233

deaths, or 3.47 per cent of the total mortality. Of this number, 200 were reported under the order of accident and negligence, 29 under suicide, and 4 under homicide.

TABLE NO. 35.

Mortality from Prominent Zymotic Diseases from 1884 *to* 1889, *inclusive.*

YEARS.	Diseases.												
	Cholera infantum.	Croup.	Diarrhea.	Diphtheria.	Dysentery.	Erysipelas.	Fever, cerebro-spinal.	Fever, typhoid. *	Measles.	Pertussis.	Scarlatina.	Septicæmia.	Total.
1884	266	49	53	110	80	19	25	137	3	14	52	27	835
1885	219	74	59	78	40	25	20	136	45	25	53	38	812
1886	362	64	38	156	79	18	26	194	18	26	21	27	1,029
1887	336	84	38	177	53	20	34	134	39	21	26	30	992
1888	370	94	50	103	63	36	34	150	55	23	34	29	1,041
1889	353	88	68	210	67	27	25	161	16	47	18	29	1,109
Average	318	75	51	139	64	24	27	152	29	26	34	30	970

* Including fever, bilious, and typho-malarial fever.

Table No. 35 represents the mortality from the most prominent zymotic diseases for the years 1884 to 1889, inclusive. The greatest mortality under this class is chargeable to cholera infantum, which for the period given has averaged 318 deaths annually. The largest number in any one year was 370, in 1888, followed by 362 deaths in 1886, 353 in 1889, 336 in 1887, 266 in 1884, and 219 in 1885. The next disease in fatality in-

cluded in this class is typhoid fever, with an average number of 152 deaths for the six years given. Diphtheria stands next in order on the list, with an average of 139 deaths for each year, followed by croup with an annual average of 75. The principal causes of death given in this table and also under the other classes will be considered further on under their special heads.

TABLE NO. 36.

Mortality from Principal Constitutional Diseases, 1884 *to* 1889, *inclusive.*

YEARS.	Diseases.										
	Dropsy.	Anæmia.	Cancer.	Mortification.	Rheumatism.	Scrofula.	Tabes mesenterica.	Phthisis (pulmonary).	Hydrocephalus.	Tubercular meningitis.	Total.
1884	80	43	213	18	26	26	4	865	27	*	1,302
1885	90	32	212	24	28	22	2	857	25	*	1,292
1886	83	28	206	27	47	16	11	809	33	19	1,279
1887	79	17	218	29	47	16	7	766	23	16	1,218
1888	75	34	203	22	43	21	14	742	30	13	1,197
1889	62	40	213	21	43	22	13	651	21	24	1,110
Average	78	32	211	23	39	20	8	782	26	18	1,233

* Not classed separately.

Table No. 36 shows the mortality from prominent constitutional diseases from 1884 to 1889, inclusive. Pulmonary consumption represents the largest mortality

from any disease recorded, the average for the past six years being 782 deaths annually. It will be seen by this table that the mortality from the disease has diminished each year, the number reported for 1889, 651, being the lowest recorded in any one year, while the largest number, 865, was returned in the year 1884. Cancer stands next in this table, with an annual average of 211. The uniformity of the annual returns from this disease is noticeable, the greatest difference between any two years being 15.

TABLE NO. 37.

Mortality from Principal Local Diseases, 1884 *to* 1889, *inclusive.*

YEARS.	Diseases.												
	Apoplexy.	Paralysis.	Convulsions.	Cephalitis.*	Brain disease.	Heart disease.	Bronchitis.	Pneumonia.	Enteritis.	Gastritis.	Peritonitis.	Liver disease.	Bright's disease, nephritis, and other kidney diseases.	Total.
1884	192	248	99	120	134	507	78	436	69	44	61	63	140	2,191
1885	206	278	93	133	122	489	112	504	57	49	44	63	157	2,307
1886	220	249	71	141	127	510	81	466	53	66	48	71	143	2,246
1887	210	253	64	117	121	552	114	556	57	54	48	69	163	2,384
1888	243	273	88	143	112	575	142	628	39	51	63	72	154	2,634
1889	259	196	76	151	126	564	127	582	56	42	57	56	200	2,492
Average	222	249	82	134	124	533	109	529	55	51	53	66	159	2,376

* Meningitis and cerebritis included.

Table No. 37 gives the mortality from the principal

local diseases from 1884 to 1889, inclusive, with an annual average of 2,376 deaths from these causes. Heart disease was the most fatal of the diseases in this table, with an average of 533 deaths each year, against 564 for the year 1889. Pneumonia was the next in numbers, with a yearly average of 529, while 582 were returned for 1889. Following these are, paralysis, with an average of 249; apoplexy, 222; kidney diseases, 159; cephalitis, 134; brain disease, 124; bronchitis, 109; convulsions, 82; liver disease, 66; enteritis, 55; peritonitis, 53; and gastritis, 51. There were 259 deaths from apoplexy in the year 1889, which is 37 more than the average for the six years, while paralysis is charged with 196 deaths, which is 53 less than the average for that disease for the period given.

TABLE NO. 38.

Mortality from Principal Developmental Diseases, 1884 *to* 1889, *inclusive.*

YEARS.	Diseases.									
	Still-born.	Debility, infantile.	Debility, premature-birth.	Malformations.	Teething.	Innutrition.	Childbirth.	Old age	Atrophy and debility.	Total.
1884.....	156	*	35	13	19	*	27	457	144	851
1885.....	145	*	39	13	13	*	31	420	167	828
1886.....	140	68	54	12	16	50	30	468	98	936
1887.....	166	56	63	10	20	76	27	449	78	945
1888.....	189	91	69	19	20	81	20	407	112	1,008
1889.....	220	79	68	24	18	63	27	426	104	1,029
Average...	169	73	55	15	18	67	27	438	117	933

* Classed with atrophy and debility.

Table No. 38 shows the mortality from the most prominent developmental diseases from 1884 to 1889, inclusive. Under old age, a yearly average of 438 was recorded. This strictly should not be classed as a disease, being more a condition at the time of death than a disease causing death. However, this term is a convenient one under which to return deaths in cases where the cause is uncertain or obscure, and there are doubtless many included under this name which should properly be otherwise classified. One hundred and seventeen deaths are recorded from atrophy and debility, as average for the period given, as against 104 for the year 1889. The average number of still births returned yearly is 169, while there were 220 reported for the year 1889.

TABLE NO. 39.

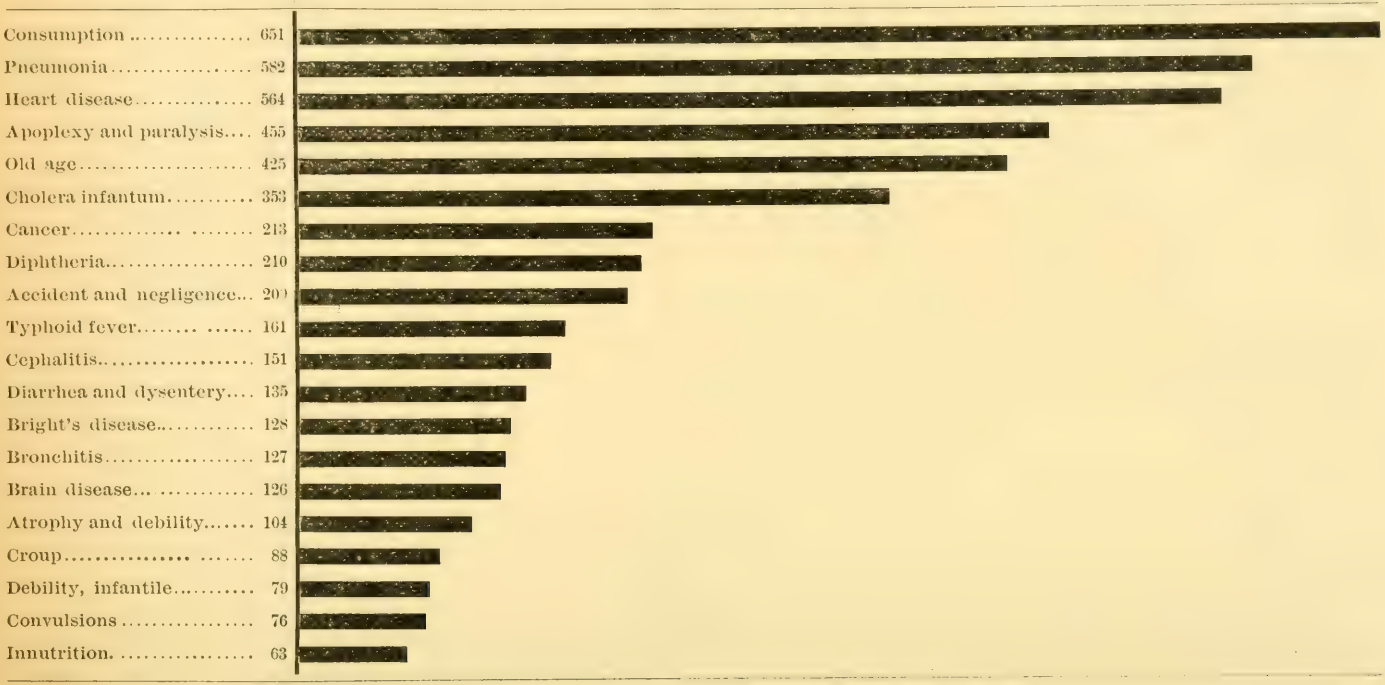
Mortality from Twenty Prominent Causes, 1884 *to* 1889, *inclusive.*

CAUSES OF DEATH.	Deaths in 1889.	Order of Fatality.					
		1889.	1888.	1887.	1886.	1885.	1884.
Consumption	651	1	1	1	1	1	1
Pneumonia	582	2	2	3	5	2	5
Heart disease	564	3	3	2	2	4	2
Apoplexy and paralysis	455	4	4	4	3	3	4
Old age	425	5	5	5	4	5	3
Cholera infantum	353	6	6	6	6	6	6
Cancer	213	7	7	7	7	7	7
Diphtheria	210	8	15	9	10	18	13
Accident and negligence	200	9	8	8	9	8	11
Typhoid fever *	161	10	9	10	8	9	10
Cephalitis †	151	11	10	12	11	10	12
Diarrhea and dysentery	135	12	12	14	13	15	9
Bright's disease	128	13	20	15	15	14	14
Bronchitis	127	14	11	13	17	12	17
Brain disease	126	15	13	11	12	11	8
Atrophy and debility	104	16	14	18	14	13	18
Croup	88	17	16	16	21	19	22
Debility, infantile	79	18	17	23	22	‡	....
Convulsions	76	19	18	21	19	16	15
Innutrition	63	20	19	19	23	‡	....

* Fever, bilious fever, and typho-malarial fever included.
† Meningitis and cerebritis included.
‡ Classed with atrophy and debility.

Table No. 39 shows the mortality from twenty prominent causes of death from 1884 to 1889, inclusive. This table is interesting in showing the relative variation of mortality from the diseases given, during the past six years. Consumption has always stood at the head of the list; pneumonia was second in 1889, 1888, and 1885, third in 1887, and fifth in 1886 and 1884; heart disease was second in 1887, 1886, and 1884, third in 1889 and 1888, and fourth in 1885; apoplexy and paralysis ranked third in 1886 and 1885 and fourth in 1889, 1888, 1887, and 1884; old age was third in 1884, fourth in 1886, and fifth in 1889, 1888, 1887, and 1885; for the six years given, cholera infantum has remained the sixth in rank; cancer has held the seventh position in the list during this period, while the other diseases given in this table show much greater variation, diphtheria ranging from the eighth rank in 1889, to the eighteenth in 1885, and increasing from the fifteenth in 1888 to the eighth in 1889. The comparative mortality from all the diseases given in this table is graphically represented in the accompanying diagram, which shows at a glance the relative mortality from the twenty most prominent causes of death recorded in the year 1889.

DIAGRAM NO. 1, SHOWING THE COMPARATIVE MORTALITY, BY ABSOLUTE NUMBER OF DECEDENTS, FROM TWENTY PROMINENT CAUSES OF DEATH DURING YEAR ENDING DECEMBER 31, 1889.



In the following tables, some of the more prominent causes of death are considered in detail, embracing in some cases data covering the past six years, or since the registration report has become sufficiently reliable to make calculations of value. Dr. S. W. Abbott, in the admirable registration report of Massachusetts, truly says: "The chief value of statistics of mortality consists in the fact that they constitute an important index of sanitary conditions. Such statistics are influenced not only by natural causes of a climatic or meteorological character, but also by those artificial causes which are embraced in the general term, public sanitation, namely, water supply, sewerage, ventilation, food supply, the prophylaxis of infectious diseases, density of population, and the housing of the working classes. The effect of a just administration of such matters is manifested in the mortality statistics of any community. It is for this reason that a correct use of registration statistics is essential to their interpretation for general as well as for sanitary purposes."

The short period covered by accurate registration in New Hampshire does not admit of deductions upon an extensive scale, but in a few years, if the registration relating to deaths is maintained as exactly as at present, we shall be in possession of data that will be very valuable from a sanitary standpoint.

CONSUMPTION.

TABLE NO. 40.

Mortality from Consumption from 1884 *to* 1889, *inclusive.*

YEARS.	Deaths.	Percentages of deaths to deaths from all causes.	Death rates per 10,000 living (estimated population).
1884	868	14.01	24.18
1885	857	13.82	23.68
1886	809	12.58	22.17
1887	766	11.82	20.82
1888	742	10.82	20.01
1889	651	9.72	17.42
Total	4,693	.....	.....
Average	782	12.13	21.38

The mortality from pulmonary consumption is and always has been much larger than that from any other cause of death; the number of deaths from this disease reported during the year 1889 was 651, which is 91 less than the number returned for 1888, and 131 less than the average for the past six years. During the period of years under consideration, 4,693 deaths from consumption have been returned, making an annual average of 782. In 1884 this disease caused 14.01 per cent of all the deaths reported; in 1885, 13.82 per cent; in 1886,

12.58 per cent; in 1887, 11.82 per cent; in 1888, 10.82 per cent; and in 1889, 9.72 per cent. These figures represent a constant decrease in the mortality rate since 1884; the average rate to the total mortality for the six years given is 12.13, while the rate for 1889 is only 9.72. The death-rate from this disease to each 10,000 of the living, based upon the calculated population for the respective years, is as follows: in 1884, 24.18 per 10,000; in 1885, 23.68; in 1886, 22.17; in 1887, 20.82; in 1888, 20.01; in 1889, 17.42; average for the six years, 12.38. It will be seen, therefore, that there is a corresponding agreement in the ratios, whether considered by the total number of deaths from the disease, the percentages of deaths to the total mortality, or death-rates to the living population of each year. Table No. 40 shows these facts at a glance.

It is impossible to give in these tables very reliable ratios between death-rates of a given age period and the number living of the same age period, owing to the fact that we have no figures upon which to make calculations later than the census of 1880, as the census of 1890 is not yet completed. However, the computations based upon the census of 1880 by age periods will doubtless give a result approximately correct for the period 1884 to 1889, inclusive; therefore two diagrams are inserted showing the death-rate of consumption per 10,000 of the population living at each age period.

DIAGRAM NO. 2, SHOWING DEATH-RATE FROM CONSUMPTION IN NEW HAMPSHIRE PER 10,000 OF THE POPULATION LIVING AT EACH AGE PERIOD, (CENSUS OF 1880) FOR THE YEARS 1884–89, INCLUSIVE.

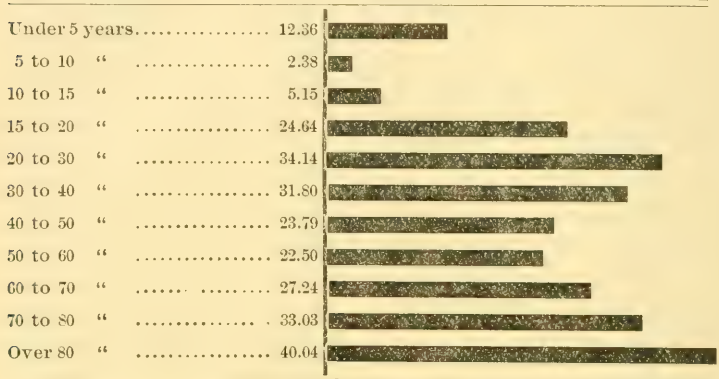


Diagram No. 2 shows the death-rate from consumption by age periods for the six years, 1884 to 1889, inclusive.

DIAGRAM NO. 3, SHOWING DEATH-RATE FROM CONSUMPTION IN NEW HAMPSHIRE PER 10,000 OF THE POPULATION LIVING AT EACH AGE PERIOD (CENSUS OF 1880) FOR 1889.

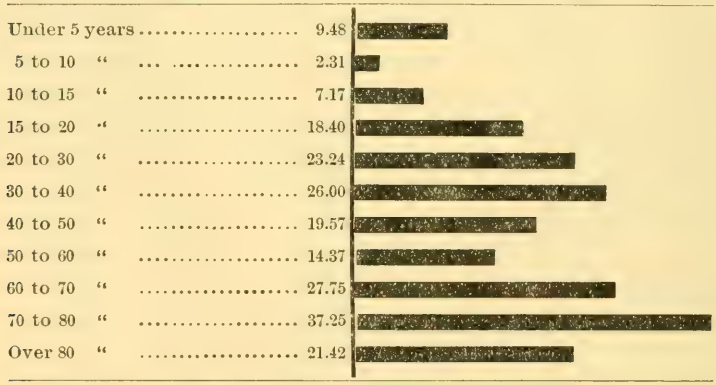


Diagram No. 3 shows the death-rate from consumption by age periods for the year 1889. The population in

New Hampshire by age periods in 1880, was as follows: Total, 346,991; under one, 6,144; one to five, 24,432; five to ten, 30,230; ten to fifteen, 30,669; fifteen to twenty, 32,055; twenty to thirty, 63,252; thirty to forty, 46,532; forty to fifty, 39,344; fifty to sixty, 31,998; sixty to seventy, 23,417; seventy to eighty, 14,227; over eighty, 4,695.

The percentages and diagrams show that the mortality from consumption is relatively larger in old age than in earlier life. Diagram No. 2 for the six years included, shows that for that period the highest rate of mortality from consumption by age periods to the living population of that age was among persons over 80 years of age, being 40.04 per 10,000 of the living population of that age period. In 1889 the highest death-rate was among persons between 70 and 80 years of age, it being 37.25 per 10,000 of the living population of that age period. It will be seen that in diagram No. 3 the rates of persons in middle life are somewhat lower for 1889 than those for the six previous years. The diagrams correspond very closely with those constructed on the mortality rates from consumption in other States, and may be regarded as representing very accurately the relative death-rates from the disease, by age periods.

The estimated population of the State for each year may be looked upon as approximately correct and can be relied upon; a percentage from certain diseases based upon the total mortality may also be considered reliable. There are, therefore, two methods of making deductions, both of which we believe to be sufficiently accurate for all purposes.

TABLE NO. 41.

Mortality from Consumption, by Counties, with Percentages of Deaths to Total Mortality, from 1884 *to* 1889, *inclusive.*

COUNTIES.	1884.		1885.		1886.		1887.		1888.		1889.		Average.	
	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.
Rockingham	130	14.89	134	14.70	142	14.74	130	14.84	96	10.71	88	10.05	120	13.32
Strafford	105	16.74	96	15.50	96	15.76	80	11.88	93	13.51	75	10.85	91	14.04
Belknap	54	18.94	50	17.30	37	10.22	48	13.00	46	11.73	42	10.79	46	13.66
Carroll	46	13.81	33	12.26	41	13.53	33	11.22	26	7.92	29	9.73	35	11.41
Merrimack	91	12.36	102	12.81	79	9.48	96	11.49	101	10.97	88	9.87	93	11.16
Hillsborough	229	13.83	233	13.69	218	12.96	179	10.55	209	11.32	168	9.64	206	11.99
Cheshire	62	12.47	75	15.18	60	12.63	50	10.37	47	9.63	53	10.09	58	11.73
Sullivan	36	13.18	36	12.67	45	13.72	32	11.30	36	11.00	28	8.91	35	11.79
Grafton	83	12.73	70	11.45	72	11.72	80	13.28	63	9.61	58	9.27	71	11.34
Coös	32	12.16	28	12.33	19	7.42	38	10.32	25	7.96	22	6.32	27	9.41
Total	868	14.01	857	13.82	809	12.58	766	11.82	742	10.82	651	9.72	782	12.13

Table No. 41 shows the mortality from consumption, by counties, with percentages of deaths to total mortality for those counties, from 1884 to 1889, inclusive. This table represents a more extensive view of death-rates than is given in the preceding one. There is considerable variation in the death-rates for the several counties for the different years, but the average for the entire period presents a remarkable uniformity among six of the counties, being 11 and a fraction per cent in each; the highest rate for the six years was returned from Strafford county, and was 14.04 per cent, followed by Belknap with 13.66, and Rockingham with 13.32, while Coös reported the lowest rate, of 9.41 per cent. The highest percentage of deaths from consumption to total mortality returned from any one county during the six years was from Belknap county in 1884, and was 18.94 per cent, while the lowest was reported from Coös in 1889, being 6.32 per cent.

The mortality from consumption in the cities of New Hampshire is given in the following tables:

TABLE NO. 42.

Deaths from Pulmonary Consumption, by Seasons, Ages, and Nativity, 1889, *for the City of Manchester.*

Months	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	American.	Foreign.	Not stated.
	5	6	11	5	4	11	5	3	8	9	5	6				
Quarters	22			20			16			20			78			
Ages	Under 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Not stated.					
	8	8	10	19	12	6	7	3	5	..	..		78			
Nativity														41	33	4
Males													30	..	..	..
Females													48	..	..	..

Percentage to total mortality of city, 9.30.

Table No. 42 gives the deaths from this disease, by seasons, ages, nativity, and sex, for the city of Manchester, with percentage to total mortality of the city. There were 78 deaths from this disease during the year 1889, 41 American and 33 foreign born, 4 nativity not stated; 8 of the decedents were under 10 years of age, 8 between 10 and 15, 10 between 15 and 20, 19 between 20 and 30, 12 between 30 and 40, 6 between 40 and 50, 7 between 50 and 60, 3 between 60 and 70, 5 between 70 and 80. By seasons, 22 died in the first quarter of the year, 20 in the second quarter, 16 in the third quarter, and 20 in the fourth quarter; 30 of the decedents were males and 48 were females; the percentage to the total mortality of the city was 9.30, which is considerably less than during

the past seven years, the average for the years 1883 to 1889, inclusive, being 12.86 per cent. The percentages for the six years prior to 1889 were as follows: In 1883, 14.89; in 1884, 14.28; in 1885, 13.03; in 1886, 15.01; in 1887, 11.15; in 1888, 12.37.

TABLE NO. 43.

Deaths from Pulmonary Consumption, by Seasons, Ages, and Nativity, 1889, for the City of Concord.

Months	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	American.	Foreign.
	2	4	2	2	4	5	2	5	2	..	3	2			
Quarters	8			11			9			5			33		
Ages	Under 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Not stated.				
	4	..	3	8	6	5	..	4	2	1	..		33		
Nativity														27	6
Males													14	..	..
Females													19	..	..

Percentage to total mortality of city, 9.81.

Table No. 43 gives a similar representation of the mortality from consumption in the city of Concord. The total number of deaths was 33, 27 American and 6 foreign born; ages of the decedents were, under 10 years, 4; 15 to 20, 3; 20 to 30, 8; 30 to 40, 6; 40 to 50, 5; 60 to 70, 4; 70 to 80, 2; over 80, 1. There were 14 males and 19 females, and by seasons, the mortality was, 8 in the first quarter, 11 in the second, 9 in the third, and 5 in the fourth. The percentage of deaths from

consumption to the total mortality of the city was 9.81, or slightly lower than the average for 1883 to 1889, inclusive, which was 9.93. The percentages for the different years mentioned were somewhat variable. In 1883 it was 11.41; in 1884, 8.66; in 1885, 10.68; in 1886, 8.60; in 1887, 10.13; in 1888, 10.23.

TABLE NO. 44.

Deaths from Pulmonary Consumption, by Seasons, Ages, and Nativity, 1889, *for the City of Nashua.*

Months	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	American.	Foreign.	Not stated.
	3	8	3	2	2	1	3	2	..	1	3	2				
Quarters	14			5			5			6			30			
Ages	Under 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Not stated.					
	2	..	2	10	4	5	2	1	3	..	1		30			
Nativity													....	21	6	3
Males													13	..	..	..
Females													17	..	..	..

Percentage to total mortality of city, 8.64.

The total mortality from consumption for the year 1889 in the city of Nashua was 30, 13 males and 17 females. Of these, 21 were American, 6 were foreign born, and in 3 instances the nativity was not stated. Two of the decedents were under 10 years of age; 2 were between 15 and 20; 10 between 20 and 30; 4 between 30 and 40; 5 between 40 and 50; 2 between 50 and 60; 1 between 60 and 70; 3 between 70 and 80; and 1, age

not stated. In the first quarter 14 deaths occurred; in the second quarter, 5; in the third quarter, 5; and in the fourth quarter, 6. The percentage of deaths from consumption to the total mortality of the city was 8.64 for 1889, a slight rise on that of last year, although considerably below the average of the seven years mentioned above, or 11.80 per cent. The percentages for the other years were, for 1883, 16.96; for 1884, 13.72; for 1885, 14.86; for 1886, 10.49; for 1887, 9.73; for 1888, 8.20.

TABLE NO. 45.

Deaths from Pulmonary Consumption, by Seasons, Ages, and Nativity, 1889, *for the City of Portsmouth.*

Months	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	American.	Foreign.	Not stated.
	3	2	2	2	..	1	1	1	..	1	1	1				
Quarters	7			3			2			3			15			
Ages	Under 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Not stated.					
	1	1	1	4	2	1	4	..	..	..	1		15			
Nativity														11	1	3
Males													7			
Females													8			

Percentage to total mortality of city, 7.73.

In Table No. 45 is considered the record of deaths from consumption in the city of Portsmouth. The total mortality from this disease in 1889 was 15, of which 7 were males and 8 were females, and 11 were American, 1 foreign-born, and 3 with nativity unreported. The ages of the decedents were as follows: Under 1, 1; between 10

and 15, 1; between 15 and 20, 1; between 20 and 30, 4; between 30 and 40, 2; between 40 and 50, 1; between 50 and 60, 4; age not stated. 1. Died in the first quarter of the year, 7; in the second, 3; in the third, 2; in the fourth, 3. There is a very noticeable decrease in the percentage to total mortality for 1889 from those for other years. For the past two years, Portsmouth has had the highest percentage of deaths from consumption to total mortality, of all the cities, but in 1889 has declined to the lowest, having only 7.73 per cent, while the average from 1883 to 1889, inclusive, was 14 per cent. For the other years of that period, the percentages were, in 1883, 16.02; in 1884, 14.74; in 1885, 12.18; in 1886, 17.84; in 1887, 16.26; in 1888, 13.26.

TABLE NO. 46.

Deaths from Pulmonary Consumption, by Seasons, Ages, and Nativity, 1889, *for the City of Dover.*

Months	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	American.	Foreign.	Not stated.
	1	1	2	3	1	2	3	3	5	1	1	3				
Quarters	4			6			11			5			26			
Ages	Under 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Not stated.					
	1	1	3	13	4	3	..	..	1	..	..		26			
Nativity														13	12	1
Males													6	..	..	..
Females													19	..	..	..
Sex not stated													1	..	..	..

Percentage to total mortality of city, 10.31.

Table No. 46 shows the mortality from consumption in the city of Dover, for the year 1889. There were 26 deaths from this disease, 6 males, 19 females, and in one case the sex was not stated; the nativity was, American 13, foreign 12, and not stated 1. One of the decedents was under 10 years of age; 1 was between 10 and 15; 3 between 15 and 20; 13 between 20 and 30; 4 between 30 and 40; 3 between 40 and 50; 1 between 70 and 80. Four died in the first quarter of the year, 6 in the second, 11 in the third, and 5 in the fourth. The percentage to the total mortality of the city was 10.31, and is the lowest returned from the city during the past seven years, the average of which was 15.97. The percentages for the other years were: For 1883, 20.97; for 1884, 16.60; for 1885, 16.17; for 1886, 21.17; for 1887, 14.57; for 1888, 12.01.

TABLE NO. 47.

Deaths from Pulmonary Consumption, by Seasons, Ages, and Nativity, 1889, *for the City of Keene.*

Months	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	American.	Foreign.
	..	1	4	1	3	1	1	1	1	..	..	..			
Quarters		5			5			3					13		
Ages	Under 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Not stated.				
	..	1	..	2	1	2	3	..	4	..	..		13		
Nativity														11	2
Males													7	..	..
Females													6	..	..

Percentage to total mortality of city, 9.62.

In Table No. 47, various facts about the mortality from consumption in the city of Keene in 1889 are given. Total number of deaths, 13, 7 males and 6 females. Of these 11 were American and 2 foreign born; 1 of the decedents was between 10 and 15 years of age; 2 between 20 and 30; 1 between 30 and 40; 2 between 40 and 50; 3 between 50 and 60; 4 between 70 and 80. Five died in the first quarter of the year, 5 in the second quarter, 3 in the third quarter. The mortality from the disease formed 9.62 per cent of the total mortality of the city, much lower than the average of the seven years, 1883 to 1889, inclusive, which was 14.67. For the other years in this period the percentages were as follows: In 1883, 16.91; in 1884, 16.00; in 1885, 22.80; in 1886, 16.00; in 1887, 11.90; in 1888, 9.47.

TABLE NO. 48.

Percentage of Deaths from Consumption to the Total Mortality of the Cities of the State for the years 1883 *to* 1889, *inclusive.*

	1883.	1884.	1885.	1886.	1887.	1888.	1889.	Aver'ge.
Manchester	14.89	14.28	13.03	15.01	11.15	12.37	9.30	12.86
Concord...	11.41	8.66	10.68	8.60	10.13	10.23	9.81	9.93
Nashua ...	16.96	13.72	14.86	10.49	9.73	8.20	8.64	11.80
Dover.....	20.97	16.60	16.17	21.17	14.57	12.01	10.31	15.97
Portsmouth	16.02	14.74	12.18	17.84	16.26	13.26	7.73	14.00
Keene.....	16.91	16.00	22.80	16.00	11.90	9.47	9.62	14.67

The above table shows the percentages of deaths from consumption to the total mortality of the cities of the State for the years 1883 to 1889, inclusive. It will be seen by this table that the death-rates from this disease for the several cities vary considerably in the different years. In

the six cities of the State the highest percentage of deaths from consumption to the total mortality of any one city during any of the seven years was in 1885, for the city of Keene, and was 22.80 per cent, while the lowest was in 1889, for the city of Portsmouth, being 7.73 per cent. An examination of the averages of percentages for the seven years for the several cities shows the highest to be for Dover, 15.97 per cent, and the lowest for Concord, with a percentage of 9.93. Keene exhibits an average percentage of 14.67; Portsmouth, of 14.00; Manchester, of 12.86; and Nashua, of 11.80.

TABLE NO. 49.

Deaths from Consumption, by Ages and Sex, by Counties, for 1889.

COUNTIES.	SEX.	Under 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Not stated.	Total.	Grand total.
Rockingham	Males	1	1	1	1	2	8	8	5	6	5	4	....	2	44	.....
	Females	....	....	1	2	2	12	10	2	4	8	3	....	...	44	88
Strafford	Males	1	....	....	....	6	5	*8	4	2	2	1	1	...	*30	.....
	Females	2	1	....	3	4	16	5	3	2	2	6	1	...	45	75
Belknap	Males	..	1	....	....	2	2	5	2	3	1	2	....	...	18	.....
	Females	....	1	....	3	4	3	3	4	1	2	2	1	...	24	42
Carroll	Males	....	1	....	....	....	3	3	..	2	3	1	....	...	13	.....
	Females	1	....	....	....	1	3	3	3	1	2	2	....	...	16	29
Merrimack	Males	3	....	....	....	3	8	6	6	7	3	....	....	1	37	.....
	Females	....	3	1	....	4	11	11	7	5	5	2	2	...	51	88
Hillsborough	Males	3	4	....	2	4	19	8	8	7	6	9	....	...	70	.....
	Females	1	2	1	8	14	23	19	10	8	7	4	....	1	98	168
Cheshire	Males	....	....	....	....	2	1	7	2	4	4	2	....	...	22	.....
	Females	....	....	....	2	1	8	5	5	1	5	2	2	...	31	53

Sullivan	Males	....	....	....	....	....	2	3	1	....	5	2	1	...	14	.....
	Females	....	....	....	1	2	3	3	2	....	1	2	....	...	14	28
Grafton	Males	....	....	1	....	3	7	2	4	2	1	3	....	...	23	.....
	Females	....	....	1	....	3	9	10	7	....	1	2	2	...	35	58
Coos	Males	1	....	1	....	....	2	1	1	1	1	2	....	1	11	.....
	Females	1	1	....	....	2	2	....	1	....	1	2	....	1	11	22
Total for State		14	15	7	22	59	147	120	77	56	65	53	10	6	651	651

* One with sex not stated.

Table No. 49 shows the deaths from consumption by ages and sex, by counties, for 1889. The heaviest mortality occurred in persons between 20 and 30 years of age, being 147, while the deaths at other ages, according to number of decedents, are as follows: Between 30 and 40, 120; between 40 and 50, 77; between 60 and 70, 65; between 15 and 20, 59; between 50 and 60, 56; between 70 and 80, 53; between 10 and 15, 22; between 1 and 5, 15; under 1, 14; over 80, 10; between 5 and 10, 7; age not stated, 6.

TABLE NO. 50.

Deaths from Consumption, by Months and Sex, by Counties, for 1889.

COUNTIES.	SEX.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Not stated.	Total.	Grand total.
Rockingham	Males	4	5	5	3	2	3	4	4	1	4	7	2	...	44	.....
	Females	3	2	7	1	4	3	4	4	....	6	5	5	...	44	88
Strafford	Males	2	6	*1	3	....	1	3	4	1	5	3	1	...	*30	.....
	Females	4	2	6	2	2	2	7	3	5	3	3	6	...	45	75
Belknap	Males	1	3	1	....	1	1	1	4	1	1	2	2	...	18	.....
	Females	3	1	4	1	1	2	3	2	2	2	2	1	...	24	42
Carroll	Males	....	....	....	1	....	3	2	2	1	1	2	1	...	13	.....
	Females	2	1	3	3	....	1	2	1	1	...	1	1	...	16	29
Merrimack	Males	2	4	3	3	5	5	2	2	3	1	1	5	1	37	.....
	Females	3	3	6	3	3	7	4	8	8	2	2	2	...	51	88
Hillsborough	Males	4	9	7	9	5	6	5	6	1	10	7	1	...	70	.....
	Females	10	10	12	7	6	8	8	5	11	5	7	9	...	98	168
Cheshire	Males	2	....	4	3	2	....	2	2	3	2	...	2	...	22	.....
	Females	3	4	2	5	3	3	4	....	1	2	1	3	...	31	53

* One with sex not stated.

TABLE NO. 50. — *Continued.*

COUNTIES.	SEX.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Not stated.	Total.	Grand total.
Sullivan	Males	2	3	1	1	1	....	....	2	1	....	...	3	...	14	.....
	Females	4	....	....	3	2	....	....	3	....	....	....	2	...	14	28
Grafton	Males	2	5	2	2	....	....	2	3	3	3	....	1	...	23	...
	Females	2	3	5	3	3	3	7	1	2	2	2	2	...	35	58
Coös	Males	1	1	....	1	2	....	1	....	1	2	....	2	...	11	.....
	Females	....	1	....	....	3	....	2	....	1	1	3	...	...	11	22
Total for State		54	63	69	54	45	48	63	56	47	52	48	51	1	651	651

Table No 50 shows the deaths from consumption by months and sex, by counties, for 1889. The highest mortality for any one month of the year was in March, when it was 69, followed by February and July with a mortality of 63 each, August 56, April and January each 54, October 52, December 51, June and November each 48, September 47, May 45, and 1 with month not stated.

TABLE NO. 51.

Deaths from Consumption, by Nationality, Civil Condition, and Sex, by Counties, for 1889.

COUNTIES.	SEX.	American.	Foreign.	Not stated.	Married.	Single.	Widowed.	Not stated.	Total.	Grand total.
Rockingham	Males	34	5	5	20	17	3	4	44	....
	Females	34	6	4	19	18	6	1	44	88
Strafford	Males	24	4	*2	13	*12	5	...	30	....
	Females	30	13	2	18	19	8	...	45	75
Belknap	Males	15	2	1	7	10	...	1	18	....
	Females	13	7	4	13	8	3	...	24	42
Carroll	Males	12	1	...	8	4	1	...	13	....
	Females	14	....	2	9	5	2	...	16	29
Merrimack	Males	28	5	4	17	16	3	1	37	....
	Females	40	9	2	25	14	9	3	51	88
Hillsborough	Males	50	16	4	20	26	8	16	70	....
	Females	57	31	10	33	38	12	15	98	168
Cheshire	Males	19	1	2	11	7	3	1	22	....
	Females	23	4	4	14	12	4	1	31	53
Sullivan	Males	10	4	...	7	4	3	...	14	....
	Females	13	....	1	3	8	3	...	14	28
Grafton	Males	18	3	2	9	11	2	1	23	....
	Females	31	1	3	21	11	3	...	35	58
Coös	Males	9	1	1	7	4	...	...	11	....
	Females	5	3	3	2	6	2	1	11	22
Total for State		479	116	56	276	250	80	45	651	651

* One with sex not stated.

Of the 651 decedents shown in Table No. 51, 479 were American-born, 116 foreign-born, and 56 with nativity not stated. According to civil condition, 276 were married at the time of decease, 250 were single, 80 were widowed, and in 45 instances the civil state was not reported.

PNEUMONIA.

Five hundred and eighty-two deaths were returned from this disease during the year 1889, as against 628 for the previous year. The average annual mortality for the six years, 1884, to 1889, inclusive, was 528; the highest mortality was in 1888, there being 628 deaths; and the lowest in 1884, when there were 436 deaths; in 1885 there were 504 deaths; in 1886, 466; in 1887, 556. The deaths from this disease in 1889 in Belknap, Carroll, Merrimack, Hillsborough, Cheshire, Sullivan, Grafton, and Coös counties, were somewhat larger than the average for the respective counties for the six years ending 1889; in Rockingham county, the mortality just equaled the average for the six years given, while in Strafford, it was somewhat below the average for the period.

TABLE NO. 52.

Mortality from Pneumonia, by Counties, from 1884 *to* 1889, *inclusive.*

COUNTIES.	Years.						Average.
	1884.	1885.	1886.	1887.	1888.	1889.	
Rockingham	45	63	77	70	83	68	68
Strafford	39	48	37	46	52	38	43
Belknap	18	24	25	44	50	37	33
Carroll	30	27	15	33	46	49	33
Merrimack	50	72	60	85	73	86	71
Hillsborough	110	128	112	128	129	131	123
Cheshire	36	52	39	55	55	52	48
Sullivan	21	22	23	22	30	31	25
Grafton	66	48	54	52	77	64	60
Coös	21	20	24	21	33	26	24
Total	436	504	466	556	628	582	528

TABLE NO. 53.

Mortality from Pneumonia, from 1884 *to* 1889, *inclusive, by Ages.*

YEARS.	Under 1 year.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Unknown.	Total.
1884	51	48	3	3	6	27	23	30	36	50	97	54	8	436
1885	69	49	8	4	11	15	27	32	37	72	105	74	1	504
1886	57	38	13	6	13	17	24	29	49	68	92	53	7	466
1887	68	33	7	5	13	28	32	40	48	89	121	68	4	556
1888	67	45	6	10	19	40	49	51	62	67	123	81	8	628
1889	61	50	8	12	17	29	36	40	48	98	100	79	4	582
Average...	62	44	7	6	13	26	32	37	46	74	106	68	5	528

Table No. 53 represents the mortality from pneumonia from 1884 to 1889, inclusive, by ages. The largest number of deaths from this disease occurred among persons between 70 and 80 years of age. The average fatality of the disease by age periods, for the past six years, is as follows: Between 70 and 80, 106; between 60 and 70, 74; over 80, 68; under 1, 62; between 50 and 60, 46; between 1 and 5, 44; between 40 and 50, 37; between 30 and 40, 32; between 20 and 30, 26; between 15 and 20, 13; between 5 and 10, 7; between 10 and 15, 6; age unknown, 5.

Diagram No. 4, Showing Death-rate from Pneumonia per 10,000 of the Population Living at each Age Period, Census of 1880, for the Year 1889.

Diagram No. 4 shows the death-rate from pneumonia per 10,000 of the population living at each age period, census of 1880, for the year 1889. While Table No. 54 represented the actual number of decedents in each age period, this diagram depicts the death-rate by age periods to the living of the respective age periods. Thus it will be noticed that in 1889, 34.50 persons out of every 10,000 living under 5 years of age died from pneumonia; between 5 and 10, 2.48; between 10 and 15, 2.12; between 15 and 20, 4.10; between 20 and 30, 3.90; between 30 and 40, 6.73; between 40 and 50, 9.27; between 50 and 60, 11.11; between 60 and 70, 31.31; between 70 and 80, 73.68; over 80, 143.77. This diagram very emphatically demonstrates the fact that the danger from pneumonia is by far the greatest under 5 years and over 60 years, with a rapidly increasing mortality from the latter age to the end of life.

TABLE NO. 54.

Mortality from Pneumonia, by Months and Quarters, from 1884 *to* 1889, *inclusive.*

YEARS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Not stated.
1884	55	55	51	52	32	13	14	11	5	28	51	67	2
1885	53	59	101	95	35	25	13	10	10	33	38	32	..
1886	32	44	73	51	51	33	22	18	18	24	46	54	..
1887	71	73	85	85	49	17	13	13	14	34	47	54	1
1888	72	95	75	73	76	24	16	23	21	43	36	72	2
1889	69	66	79	102	51	22	15	19	16	53	41	49	..
Total	352	392	464	458	294	134	93	94	84	215	259	328	5
Quarters	1,208			886			271			802			
Percentages	38.08			27.93			8.54			25.28			

Table No. 54 gives the mortality from pneumonia by months and quarters from 1884 to 1889, inclusive. For this period of years, the largest number of deaths occurred in March, it being 464, followed by April with 458, February with 392, January with 352, December with 328, May with 294, November with 259, October with 215, June with 134, August with 94, July with 93, and September with 84. Twelve hundred and eight persons died in the first quarters of these years, 886 in the second, 271 in the third, and 802 in the last.

HEART DISEASE.

Under this head, 564 deaths were returned for the year 1889; to this classification may be added pericarditis, which would make the total 579; of this number, 296 were males and 283 females. By ages, 22 were under 1 year; 3 between 1 and 5; 4 between 5 and 10; 4 between 10 and 15; 12 between 15 and 20; 20 between 20 and 30; 31 between 30 and 40; 36 between 40 and 50; 60 between 50 and 60; 123 between 60 and 70; 172 between 70 and 80; and 75 over 80 years of age; 2, age unreported.

BRAIN DISEASES.

TABLE NO. 55.

Mortality from Brain Diseases, 1884 *to* 1889, *inclusive.*

YEARS.	Diseases.						Total.
	Cephalitis. *	Apoplexy.	Paralysis.	Insanity.	Convulsions.	Brain diseases.	
1884	120	192	248	22	99	134	815
1885	133	206	278	27	93	122	859
1886	141	220	249	24	71	127	832
1887	117	210	253	25	64	121	790
1888	143	243	273	37	88	112	896
1889	151	259	196	35	76	126	843
Average	134	222	249	28	82	124	829

* Meningitis and cerebritis included.

Table No. 55 shows the mortality from brain diseases for the years 1884 to 1889, inclusive. Under this head are included cephalitis, apoplexy, paralysis, insanity, convulsions, and other diseased conditions classed under brain diseases. It will be seen by this table that apoplexy shows an increasing mortality, while paralysis shows a corresponding decrease; this is probably in a measure if not wholly due to a more careful distinction between the two conditions by the physicians in their returns than heretofore, although it is by no means certain that this will account for the entire change.

In the relation of one disease to another for the period given, the average number of deaths from apoplexy was 222, as against 259 reported for 1889; from paralysis, 249, against 196 for 1889; under cephalitis was reported an average annual mortality of 134, against 151 for 1889; the average number returned from insanity was 28, against 35 for 1889. The figures given in the table show a somewhat increased death-rate for the past two years over the four previous years. The average annual number of deaths from all of the diseases included in this table is 829, while for 1889 it was 843.

OLD AGE.

Under old age 426 deaths were returned, 196 males and 230 females. The ages under which the deaths from this cause were returned were as follows: Between 60 and 70, 3; between 70 and 80, 84; over 80, 337; and 2 with age unknown.

CHOLERA INFANTUM.

TABLE NO. 56.

Mortality from Diarrheal Diseases, 1884 *to* 1889, *inclusive*.

YEARS.	Diseases.					Total of diarrheal diseases.
	Cholera infantum.	Cholera morbus.	Diarrhea.	Dysentery.	Enteritis.	
1884	266	21	52	80	69	488
1885	219	20	40	40	57	376
1886	362	14	38	79	53	546
1887	336	16	38	53	57	500
1888	370	8	50	63	39	530
1889	353	12	68	67	56	556
Average	316	15	48	64	55	499

Table No. 56 represents the mortality from diarrheal diseases from 1884 to 1889, inclusive. Under these diseases cholera infantum ranks first, with an average yearly mortality of 316, followed by dysentery, with an average of 64, enteritis with an average of 55, diarrhea with 48, cholera morbus with 15. These figures represent an annual average mortality for the past six years, chargeable to diarrheal diseases, of 499, as against 556 for the year 1889, which is the highest mortality for the period stated, the lowest being in 1885, with 376 deaths.

TABLE NO. 57.

Mortality from Cholera Infantum from 1884 *to* 1889, *inclusive.*

YEARS.	Deaths.	Percentage of deaths to deaths from all causes.	Death-rates per 10,000 living (estimated population).
1884	266	4.29	7.41
1885	219	3.53	6.05
1886	362	5.63	9.92
1887	336	5.18	9.13
1888	370	5.39	9.98
1889	353	5.27	9.44
Average	316	4.88	8.65

Table No. 57 shows the mortality from cholera infantum from 1884 to 1889, inclusive, also giving the percentages of deaths to deaths from all causes for each year, and the death-rate to each 10,000 of the living population. Cholera infantum is more destructive to the infant population than any other disease, and its fatality in some localities, especially in the city of Manchester, is excessive. The annual average mortality from this disease for the past six years was 316, or 4.88 per cent of the total mortality for that period; in 1889 the number of deaths was 353, 37 more than the average for the period mentioned.

TABLE NO. 58.

Mortality from Cholera Infantum from 1884 *to* 1889, *inclusive, by Ages.*

YEARS.	Under 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Unknown.	Total.
1884	214	48	...	...	...	...	1	...	1	...	...	...	2	266
1885	186	33	...	...	...	...	...	...	...	...	...	...	...	219
1886	283	77	2	...	...	...	...	...	...	...	...	...	...	362
1887	284	51	...	...	...	...	...	...	...	...	...	...	1	336
1888	298	70	...	...	...	...	...	...	...	...	...	...	2	370
1889	297	54	1	...	...	...	...	...	...	...	...	...	1	353
Average	260	55	.5	...	...	...	.1	...	.1	...	...	...	1	317

The above table shows the mortality from cholera infantum for the past six years by ages. It will be noticed that the mortality from this disease is confined largely to infants under one year of age, 260 deaths out of a total of 317 being the yearly average for the period given; between 1 and 5 the yearly average mortality was 55.

TABLE NO. 59.

Cholera Infantum, by Cities.

	1883.	1884.	1885.	1886.	1887.	1888.	1889.
Manchester	131	112	88	122	148	117	86
Dover	7	10	15	15	13	19	5
Nashua	15	14	13	30	20	39	43
Portsmouth	4	3	9	6	4	9	9
Concord	9	12	5	7	8	11	13
Keene	9	6	2	7	5	2	8
Total for cities	175	157	132	187	198	197	164
Total for State	278	268	219	362	336	370	353

Table No. 59 shows the number of deaths from cholera infantum occurring annually in the cities of the State from 1883 to 1889, inclusive. As represented by this table the mortality from this disease in the city of Manchester for the six years prior to 1889 was very large, but in 1889 the death-rate was considerably lower, being 86 as against 117 for 1888, 148 for 1887, 122 for 1886, 88 for 1885, 112 for 1884, 131 for 1883; thus the returns for 1889 were the smallest ever made for the city, slightly lower than those for 1885. Five deaths from cholera infantum were returned for the year 1889 from Dover, which was a great reduction from the returns for the five previous years. Nashua returned 43 deaths from this disease for the year 1889, which is the largest number reported from that city for any one year during the period given. Portsmouth reported 9 deaths, which was

the same number as in 1888; Concord returned 13, as against 11 in 1888, and Keene 8, against 2 the previous year. The mortality from this disease for Dover, Nashua, Portsmouth, Concord, and Keene is given for the purpose of comparison with the mortality in Manchester; the mortality from this disease in the latter city has been emphasized in former reports, and the decrease in the number of deaths for the past year, it is hoped, is an index to sanitary improvements which have been inaugurated by the city board of health.

TABLE NO. 60.

Cholera Infantum, by Ages, Sex, and Months, particularly showing the number of Decedents in the Cities and Towns returning the greatest Mortality from this Disease.

TOWNS.	SEX.	Ages.				Months.													
		Under 1.	1 to 5.	5 to 10.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Not stated.	Total.	Grand total.
Portsmouth	Males	5	2						1			2	4						7	
	Females	2										2							2	9
Dover	Males	3										1	1		1				3	
	Females	2										1		1					2	5
Concord	Males	8										4	4						8	
	Females	4	1										3	1	1				5	13
Manchester	Males	40	3								8	13	8	10	3		1		43	
	Females	32	11						1	1	10	14	10	4	2	1			43	86
Nashua	Males	23	4							1	5	11	6	4					27	
	Females	15	1								1	4	8	2		1			16	43
Keene	Males	3	3									2	2	1	1				6	
	Females	2										1	1						2	8

TABLE NO 60. — *Continued.*

TOWNS.	SEX.	Ages.				Months.													
		Under 1.	1 to 5.	5 to 10.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Not stated.	Total.	Grand total.
Alstead	Males	2											2						2	
	Females	1										1							1	3
Bartlett	Males	1											1						1	
	Females	3											1	1	1				3	
	Not stated	1												1					1	5
Berlin	Males	1													1				1	
	Females	3	2								1	2		1			1		5	6
Bristol	Males	1											1						1	
	Females	2											2						2	3
Claremont	Males	4										1	3						4	4
Conway	Males	1													1				1	
	Females	2	1										1	2					3	4

Derry	Males	2										2						2	
	Females	1											1					1	3
Exeter	Males	1	1								1		1					2	
	Females		1									1						1	3
Franklin	Males	4										3	1					4	
	Females	2									1	1						2	6
Gilford	Males	3							1			1	1					3	
	Females	1												1				1	4
Greenville	Males	4									1	1	1				1	4	
	Females	2										1	1					2	6
Laconia	Males	6	1							1	2	2	1	1				7	
	Females	4											4					4	11
Littleton	Males	3											1	2				3	
	Females	1										1						1	4
Meredith	Males	2										1	1					2	
	Females	1										1						1	3
Newmarket	Males	2	1				2				1							3	
	Females	3										2	1					3	6
Newport	Males	1										1						1	
	Females	2											2					2	3
Salem	Males	2										2						2	
	Females	1										1						1	3

TABLE NO. 60. — *Continued.*

TOWNS.	SEX.	Ages.				Months.													
		Under 1.	1 to 5.	5 to 10.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Not stated.	Total.	Grand total.
Seabrook	Males	1	1	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	2	..
	Females	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	3
Somersworth	Males	10	..	..	..	..	..	1	2	..	..	3	2	1	1	..	..	..	10	..
	Females	14	1	..	..	1	..	..	1	2	1	4	5	..	1	..	..	..	15	25
Swanzey	Males	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..
	Females	2	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	2	3
Whitefield	Males	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..
	Females	2	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	2	3
Remaining towns	Males	29	8	1	1	..	..	..	..	3	2	6	11	12	3	2	..	..	39	..
	Females	27	12	..	..	1	..	..	..	1	..	3	17	12	4	..	..	1	39	78
Total		297	54	1	1	2	..	3	5	10	29	81	118	73	24	4	3	1	353	353

This table shows the deaths from cholera infantum by ages, sex, and months, especially in the cities and towns of the State returning the greatest mortality from this disease. Two deaths occurred in January, 3 in March, 5 in April, 10 in May, 29 in June, 81 in July, 118 in August, 73 in September, 24 in October, 4 in November, and 3 in December. It will be seen by this that the mortality from cholera infantum was most excessive in August, July ranking next, and September third in the order of fatality.

CANCER.

The number of deaths from cancer has been very uniform during the past six years; the annual average for the period is 211, the number reported for 1889 being 213.

TABLE NO. 61.

Mortality from Cancer, with ratios to estimated Population and to total Mortality from 1884 *to* 1889, *inclusive.*

YEARS.	Deaths.	Death-rates per 10,000 of estimated population.	Ratio to total mortality per 1,000.
1884	213	5.93	34.39
1885	212	5.85	34.19
1886	206	5.64	32.06
1887	218	5.92	33.65
1888	203	5.47	29.62
1889	213	5.70	31.81
Average	211	5.75	32.62

In the above table may be seen the total number of deaths from cancer for each year from 1884 to 1889, inclusive, with the rate per 10,000 of the estimated population of each year, and also the ratio to total mortality per 1,000. Of the 213 deaths from cancer reported for the year 1889, 113 did not state the organ or organs affected, but reported simply "cancer." The classified cases of cancer were, cancer of stomach 28, cancer of uterus 21, cancer of liver 10, cancer of bowels 10, cancer of breast 9, cancer of rectum 8, cancer of face, lip, throat, and tongue 2 each, and cander of bladder, eye, gall duct, kidney, lungs, and pharynx 1 each.

DIPHTHERIA AND CROUP.

During the year 1889 there were returned 210 deaths from diphtheria and 88 from croup. As it is believed by many physicians that these diseases are identical, they are grouped together in this report, although the figures relating to each are entered separately.

TABLE NO. 62.

Mortality from Diphtheria from 1884 *to* 1889, *inclusive, by Ages.*

YEARS.	Under 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Unknown.	Total.
1884	8	39	34	17	4	2	..	1	3	..	..	1	1	110
1885	10	32	22	5	3	4	..	1	1	..	..	....		78
1886	9	53	58	22	7	3	1	1	2	..	..	....		156
1887	7	74	51	20	6	9	4	2	1	1	1	..	1	177
1888	6	43	36	7	4	2	1	1	2	1	..	....		103
1889	7	86	68	18	13	10	3	3	..	1	.	..	1	210
Average	8	54	45	15	6	5	1	1	1	.5	.1	.1	.5	139

The above table shows the mortality from diphtheria from 1884 to 1889, inclusive, by years and ages. There were 110 deaths reported in 1884, 78 in 1885, 156 in 1886, 177 in 1887, 103 in 1888, and 210 in 1889. The mortality for 1889 was 107 larger than that of the preceding year, and considerably higher than that of any of the years embraced in that period. The average annual number of deaths for the period was 139.

TABLE NO. 63.

Diphtheria, by Ages, Sex, and Months, particularly showing number of Decedents in the Cities and Towns returning the greatest Mortality from this Disease.

Sex.	Months. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	TOWNS.	Whole Number. Total.	Male.	Female.	Unknown.	Ages. Under 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Unknown.
M.				2	1				1	1				Portsmouth	8	5	3			2	2		1								
F.		2			1									"						2	1										
M.				2		1		5	4	3		2		Dover	39	17	22			11	5		1								
F.			1	2	1	1	2	4	1	5	1	4		"						11	9	1	1								
M.	2							2	5	3	1			Manchester	24	12	11	*1	2	7	2	2									
F.	1		1	2				2	1	2	2			"						4	6	1									
M.				1	2	1	1							Nashua	18	5	13			2	2	1									
F.		1	1	2		5	2	1		1				"						7	2	2	1		1						
M.				1					1	6	2	2		Keene	24	12	12		1	5	4			1	1						
F.					1				2	5	2	2		"					1	6	4				1						
M.										2				Andover	3	2	1			1	1										
F.									1					"							1										
M.			1											Barrington	3	1	2				1										
F.											2			"						2											
F.	1		3											Bristol	4		4		1	1			1	1							
M.							1							Claremont	4	1	3			1											
F.							1			2				"						1	1			1							

M.	..	1	..	..	..	..	..	..	..	..	..	..	..	..	East Kingston	3	1	2	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..
F.	1	1	..	..	..	..	..	..	..	..	..	..	..	..	" "	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..
M.	..	..	..	..	..	..	..	..	..	..	..	2	..	..	Greenland	3	2	1	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..
F.	..	..	..	..	..	1	..	..	..	..	..	..	..	..	"	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
M.	..	..	..	..	..	..	..	..	..	..	3	1	..	..	Milan	5	4	1	..	..	1	2	..	..	1	..	..	..	..	..	..	..	..	..
F.	..	..	..	..	..	..	..	..	..	1	..	..	..	..	"	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
M.	..	..	..	..	..	3	..	..	..	..	..	..	..	..	Peterborough	6	3	3	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..
F.	..	..	..	..	1	1	1	..	..	..	..	..	..	..	"	..	..	..	..	..	..	2	1	..	..	..	..	..	..	..	..	..	..	..
M.	..	..	..	..	..	..	..	..	..	..	..	1	..	..	Rollinsford	3	1	2	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..
F.	..	..	..	..	..	..	2	..	..	..	..	..	..	..	"	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..
M.	..	..	..	..	..	..	..	..	..	..	2	1	..	..	Shelburne	3	3	..	..	..	..	1	..	2	..	..	..	..	..	..	..	..	..	..
M.	..	..	1	..	..	..	..	..	..	1	..	..	..	..	Somersworth	6	2	4	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..
F.	2	1	..	..	..	..	..	..	..	1	..	..	..	..	"	..	..	..	..	1	1	1	..	..	1	..	..	..	..	..	..	..	..	..
F.	..	..	..	..	..	..	..	..	..	..	..	4	..	..	Westmoreland	4	..	4	..	..	..	1	2	..	1	..	..	..	..	..	..	..	..	..
M.	1	..	1	..	2	..	1	1	..	8	5	2	..	..	Remaining towns	50	21	29	..	..	9	5	2	1	2	..	1	..	1	..	..	..	..	..
F.	5	3	1	3	4	2	..	1	2	..	3	5	..	..	" "	..	..	..	..	1	9	10	2	3	2	..	1	..	..	..	..	..	..	1
	13	9	10	15	13	15	11	16	18	41	23	26	..		Total	210	92	117	1	7	86	68	18	13	10	3	3	..	1	..	..	..	..	1

* Classed with males.

Table No. 63 shows the deaths from diphtheria for 1889, by ages, sex, and months, and also by the cities and the towns returning the greatest number of deaths from this disease. Of the 210 decedents 92 were males and 117 females, in 1 case age not reported; 7 were under 1 year of age, 86 between 1 and 5, 68 between 5 and 10, 18 between 10 and 15, 13 between 15 and 20, 10 between 20 and 30, 3 between 30 and 40, 3 between 40 and 50, 1 between 60 and 70, and 1 age not stated. A statement of the mortality from this disease by months shows that the largest number of deaths occurred in the last quarter of the year. There were 13 deaths in January, 9 in February, 10 in March, 15 in April, 13 in May, 15 in June, 11 in July, 16 in August, 18 in September, 41 in October, 23 in November, and 26 in December.

TABLE NO. 64.

Mortality from Croup from 1884 *to* 1889, *inclusive, by Ages.*

YEARS.	Under 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Unknown.	Total.
1884	8	35	6	..	..	..	..	..	..	..	..	..	..	49
1885	20	41	9	..	..	1	2	..	1	..	..	..	..	74
1886	13	40	10	1	..	..	..	..	..	..	..	..	..	64
1887	26	48	7	2	..	..	..	..	..	..	1	..	..	84
1888	16	67	9	..	..	..	1	..	..	..	1	..	..	94
1889	11	65	11	1	..	..	..	..	..	..	..	..	..	88
Average	15	49	8	.6	..	.1	.5	..	.1	..	.3	..	..	75

Table No. 64 shows the mortality from croup from 1884 to 1889, inclusive, by years and ages. The average

annual number of deaths from this disease for the period given was 75, as against 88 for the year 1889, which was 6 less than the number returned in 1888, when the mortality was the highest reported for any of the past six years. The average annual number of deaths by age periods was as follows: Under 1, 15; between 1 and 5, 49; between 5 and 10, 8; between 10 and 15, .6; between 20 and 30, .1; between 30 and 40, .5; between 50 and 60, .1; between 70 and 80, .3. Of the 88 decedents from the disease 47 were males and 40 were females and 1 sex not stated. The deaths by months were as follows: January, 6; February, 9; March, 6; April, 4; May, 8; June, 4; July, 3; August, 5; September, 6; October, 12; November, 8; December, 17. It will be observed that croup, like diphtheria, was the most fatal during the last quarter of the year.

TABLE NO. 65.

Mortality from Croup and Diphtheria from 1884 *to* 1889, *inclusive.*

YEARS.	Deaths.			Percentages of deaths to deaths from all causes.			Death-rates per 10,000 living.		
	Croup.	Diphtheria.	Total.	Croup.	Diphtheria.	Total.	Croup.	Diphtheria.	Total.
1884	49	110	159	.79	1.77	2.56	1.36	3.06	4.42
1885	74	78	152	1.19	1.25	2.44	2.04	2.15	4.19
1886	64	156	220	.99	2.41	3.40	1.75	4.27	6.02
1887	84	177	261	1.29	2.73	4.02	2.28	4.81	7.09
1888	94	103	197	1.37	1.50	2.87	2.53	2.77	5.30
1889	88	210	298	1.31	3.13	4.44	2.35	5.61	7.96
Total	453	834	1,287	....	....	....	....	....	....
Average	75	139	214	1.15	2.13	3.28	2.05	3.78	5.83

Table No. 65 shows the deaths from diphtheria and croup from 1884 to 1889, inclusive, with the percentages of deaths to deaths from all causes, and also the death-rates per 10,000 of the living population of each year. The combined mortality from these diseases for the past six years is 1,287, or an average annual mortality of 214, as against 298 for the year 1889. There were more deaths returned for 1889 from diphtheria and croup than for any other of the six preceding years, being 4.44 per cent of the deaths from all causes of that year. The average percentage of deaths from these two diseases to the total mortality of each year was 3.28 per cent annually. Seven and ninety-six hundredths persons out of every 10,000 of the living population died from diphtheria and croup in 1889, while the average annual death-rate per 10,000 for the period given was 5.83.

TYPHOID FEVER.

In the year 1889 161 deaths were returned from typhoid fever. In 1884 this disease caused 137 deaths, in 1885, 136; in 1886, 194; in 1887, 134; in 1888, 150; the average annual mortality from this disease for the six years given in the following table is 152, that reported for the year 1889 being 9 in excess of this average.

TABLE NO. 66.

Mortality from Typhoid Fever from 1884 *to* 1889, *inclusive.*

YEARS.	Deaths.	Percentages of deaths to deaths from all causes.	Death-rates per 10,000 living (estimated population).
1884	137	2.21	3.81
1885	136	2.19	3.75
1886	194	3.01	5.31
1887	134	2.06	3.64
1888	150	2.18	4.04
1889	161	2.40	4.30
Total	912	.....	.....
Average	152	2.34	4.14

The percentages of deaths from typhoid fever to deaths from all causes for the period in Table No. 66 average 2.34 per cent annually. The death-rates per 10,000 of the living population for the same period average 4.14 to each 10,000.

TABLE NO. 67.

Mortality from Typhoid Fever, by Counties, with Percentages of Deaths to Total Mortality, from 1884 to 1889, inclusive.

COUNTIES.	1884.		1885.		1886.		1887.		1888.		1889.		Average.	
	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.
Rockingham	17	1.94	18	1.97	23	2.38	10	1.14	9	1.00	15	1.71	15	1.69
Strafford	12	1.91	12	1.93	21	3.44	17	2.52	13	1.88	19	2.74	16	2.40
Belknap	13	4.56	9	3.11	31	8.56	13	3.52	8	2.04	8	2.05	14	3.97
Carroll	4	1.20	8	2.97	3	.99	5	1.70	6	1.82	6	2.01	5	1.78
Merrimack	15	2.03	15	1.88	23	2.76	14	1.67	33	3.58	20	2.24	20	2.36
Hillsborough	32	1.93	37	2.17	46	2.73	41	2.41	42	2.27	39	2.24	40	2.29
Cheshire	14	2.81	14	2.83	12	2.52	6	1.24	5	1.02	10	1.90	10	2.05
Sullivan	4	1.46	4	1.40	6	1.82	5	1.76	3	.91	4	1.26	4	1.60
Grafton	13	1.99	11	1.80	21	3.40	9	1.49	19	2.90	15	2.40	15	2.33
Coös	13	4.94	8	3.52	8	3.12	14	3.80	12	3.82	25	7.18	13	4.39
Total	137	2.21	136	2.19	194	3.01	134	2.06	150	2.18	161	2.40	152	2.34

Table No. 67 represents the mortality from typhoid fever by counties, with percentages of deaths to total mortality from 1884 to 1889, inclusive. This table presents an interesting study of the mortality rates from this disease in the several counties for the series of years given in the table. It will be observed that the average annual death-rate for the entire State for the six years was 2.34 per cent of the total mortality. Examining the percentages by counties we find that Coös county had nearly double this rate, or 4.39 per cent of the total mortality of that county. The average for Belknap county was 3.97; for Strafford, 2.40; for Merrimack, 2.36; for Grafton, 2.33; for Hillsborough, 2.29; for Cheshire, 2.05; for Carroll, 1.78; for Rockingham, 1.69; while Sullivan reported only 1.60 per cent of its mortality from typhoid fever. The highest percentage of deaths from this disease to total mortality in any county for any one year was reported from Coös county in 1889, it being 7.18 per cent of the deaths from all causes in that county, while the lowest percentage was returned from Sullivan county in 1888, and was .91 per cent. The high death-rate from this disease in Coös county is especially noticeable throughout the entire period covered by the table.

TABLE NO. 68.

Mortality from Typhoid Fever from 1884 *to* 1889, *inclusive, by Ages.*

YEARS.	Under 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Unknown.	Total.
1884	5	10	7	11	21	34	12	8	7	8	8	3	3	137
1885	2	7	7	11	20	34	14	8	7	10	11	3	2	136
1886	2	6	15	12	33	51	16	12	15	14	16	2	..	194
1887	2	6	1	16	22	41	17	8	7	6	5	2	1	134
1888	3	13	4	11	26	39	12	8	8	9	8	3	6	150
1889	4	5	9	14	26	50	13	14	10	5	6	4	1	161
Average	3	8	7	12	24	41	14	9	9	8	9	2	2	152

Table No. 68 shows the mortality from typhoid fever from 1884 to 1889, by ages. The deaths from this disease by months for 1889 were as follows: January, 10; February, 6; March, 8; April, 7; May, 6; June, 7; July, 12; August, 15; September, 20; October, 35; November, 22; December, 13.

Under the term "typhoid fever" are included fever, bilious fever, and typho-malarial fever.

KIDNEY DISEASES.

For the year 1889, 200 deaths were returned from Bright's disease and other kidney diseases, a considerably larger number than has been returned in any previous year. In 1884, 140 deaths from these diseases were reported; in 1885, 157; in 1886, 143; in 1887, 163; in 1888, 154. Forty-six more deaths were reported in 1889

than in the year before, and 41 more than the average annual number for the period given, which was 159. The ratio of deaths from these causes to each 1,000 of the decedents from all causes was 29.87 per 1,000 in 1889, while for the average of the six years it was 24.61.

TABLE NO. 69.

Mortality from Bright's Disease, Nephritis, and other Kidney Diseases, and from Dropsy, with Ratios to Total Mortality, from 1884 *to* 1889, *inclusive.*

YEARS.	Total mortality.	Deaths from Bright's disease, nephritis, and other kidney diseases.	Ratio to total mortality per 1,000.	Deaths from dropsy.	Ratio to total mortality per 1,000.	Totals.	Ratio to total mortality per 1,000.
1884	6,194	140	22.60	80	12.91	220	35.51
1885	6,201	157	25.32	90	14.51	247	39.83
1886	6,426	143	22.25	83	12.92	226	35.17
1887	6,479	163	25.16	79	12.19	242	37.35
1888	6,854	154	22.47	75	10.94	229	33.41
1889	6,696	200	29.87	62	9.26	262	39.13
Average	6,475	159	24.61	78	12.12	238	36.73

DROPSY.

There were returned for the year 1889, 62 deaths from dropsy, a less number than has been previously returned from this cause, which is doubtless owing to a better classification of the causes of death.

BRIGHT'S DISEASE.

One hundred and twenty-eight deaths occurred from this disease during the year 1889, 67 males and 61 females. One decedent was between 1 and 5 years of age, 3 between 15 and 20, 9 between 20 and 30, 14 between 30 and 40, 14 between 40 and 50, 26 between 50 and 60, 28 between 60 and 70, 26 between 70 and 80, 7 over 80 years of age. Thus it will be seen that this disease is incident to the more advanced years of life.

SCARLET FEVER.

Only 18 deaths were registered from scarlet fever during the year 1889, a smaller number than ever reported for a single year. During the past six years 204 deaths from this disease have been reported, averaging 34 annually.

TABLE NO. 70.

Mortality from Scarlatina from 1884 *to* 1889, *inclusive.*

YEARS.	Deaths.	Percentages of deaths to deaths from all causes.	Death-rates per 10,000 living (estimated population).
1884	52	.83	1.44
1885	53	.85	1.46
1886	21	.32	.57
1887	26	.40	.70
1888	34	.49	.91
1889	18	.26	.48
Total	204	.....	.....
Average	34	.52	.92

Table No. 70 gives the mortality from scarlet fever from 1884 to 1889, inclusive, also percentages of deaths to deaths from all causes and the death-rates to each 10,000 of the living population. The mortality from this disease is undoubtedly much less than in former years, on account of the greater precautions taken against its spread and the better understanding of the nature of the disease.

TABLE NO. 71.

Mortality from Scarlatina from 1884 *to* 1889, *inclusive, by Ages.*

YEARS.	Under 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Unknown.	Total.
1884	7	20	12	8	1	4	..	..	..	..	..	..	..	52
1885	5	30	11	4	1	1	1	..	..	..	..	..	..	53
1886	1	8	9	1	..	1	..	..	..	..	..	..	1	21
1887	5	10	3	6	..	2	..	..	..	..	..	..	..	26
1888	5	16	5	3	2	..	1	1	..	1	..	..	..	34
1889	4	7	3	2	1	..	..	..	..	..	..	..	1	18
Average	4	15	7	4	.8	1	.3	.1	..	.1	..	..	.3	34

Table No. 71 shows the mortality from scarlet fever from 1884 to 1889, inclusive, by ages and years. By it the fact is emphasized that the disease is a disease of childhood, over one half of all the decedents being under 5 years of age.

TABLE NO. 72.

Deaths from Scarlatina, by Counties, 1889.

COUNTIES.	Deaths.	COUNTIES.	Deaths.
Rockingham	1	Hillsborough	7
Strafford	1	Cheshire	2
Belknap	1	Sullivan	1
Carroll	.....	Grafton	1
Merrimack	2	Coös	2

The distribution of the mortality from scarlet fever by counties for the year 1889 is shown in Table No. 72. Seven, the largest number returned from any one county, were reported from Hillsborough, 2 each from Merrimack, Cheshire, and Coös, 1 each from Rockingham, Strafford, Belknap, Sullivan, and Grafton.

MEASLES.

Sixteen deaths from measles were returned during the year 1889, as against 55 in 1888.

TABLE NO. 73.

Mortality from Measles from 1884 *to* 1889, *inclusive.*

YEARS.	Deaths.	Percentages of deaths to 100 deaths from all causes.	Death-rates per 10,000 living (estimated population).
1884	3	.04	.08
1885	45	.72	1.24
1886	18	.28	.49
1887	39	.60	1.06
1888	55	.80	1.48
1889	16	.23	.42
Total	176	.....	.....
Average	29	.44	.79

The above table represents the mortality from measles from 1884 to 1889, inclusive, with percentages to total mortality for each year, and death-rates to each 10,000 of the living population. One hundred and seventy-six deaths from measles were returned during the past six years, 1884 to 1889, inclusive, giving an average annual mortality of 29 deaths.

TABLE NO. 74.

Mortality from Measles from 1884 *to* 1889, *inclusive, by Ages.*

YEARS.	Under 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Unknown.	Total.
1884	1	1	..	..	1	..	..	..	..	..	..	..	..	3
1885	12	26	5	1	1	..	..	..	..	..	..	..	..	45
1886	5	13	..	..	..	..	..	..	..	..	..	..	..	18
1887	19	10	2	1	3	..	2	1	..	1	..	..	..	39
1888	14	20	6	3	2	2	5	1	1	..	..	1	..	55
1889	2	6	1	..	2	2	1	..	1	..	..	..	1	16
Average	9	12	2	.8	1	.6	1	.3	.3	.1	..	.1	.1	29

Table No. 74 gives the mortality from measles from 1884 to 1889, inclusive, by ages. This is also an infantile disease, a very large majority of the decedents being under 5 years of age, as will be seen by an examination of the table.

SMALL-POX.

Last and least in the whole list of mortality causes comes small-pox, a disease which, more than any other that ever invaded New Hampshire, terrorizes the public, and from which there is less danger than from any other known disease in any locality where the public avails itself of the protection of vaccination. During the past six years there have been but two deaths from small-pox in New Hampshire, and those cases were imported from Canada during the Montreal epidemic in 1885. There

have been less than ten cases of small-pox and varioloid in the State during the past six years. The protection offered against this disease through vaccination is so complete and positive, that if the people will but avail themselves of it, the disease will be practically exterminated. The two deaths alluded to were in unvaccinated persons.

INDEX.

PAGE.

Births, 1889 204
by counties, showing proportion of males to females 44
by sex and months, by counties 46
for the year ending December 31, 1889 22-43
from 1880-1889, inclusive 18
in various countries 203
percentage of American and foreign, by counties, 1889 207
to each 1,000 of population, 1889 21
in the cities 205
twin, by months and counties, 1889 45
with estimated population and rates for each year, 1884-1889 202
Birth-rate of the State 201
various countries 206
Bright's disease, deaths from, 1889 308
1884-1889 307

Cancer, deaths from, 1884-1889 295
Cholera infantum, deaths from, by ages, sex, months, particularly in the cities of the State, 1889 291
deaths from, 1884-1889 287
by ages 288
in the cities 289
Constitutional diseases, deaths from principal, 1884-1889 250
Consumption, deaths from, 1884-1889 258
by ages and sex, by counties, 1889 272
by counties, with percentage to total mortality, 1884-1889 362
by months and sex, by counties, 1889 275
by nationality, condition, and sex, by counties, 1889 277
in the cities of the State, 1883-1889 270
Concord 265
Dover 268
Keene 269
Manchester 264
Nashua 266
Portsmouth 267
diagram showing death-rate from 260
Croup, deaths from, 1889 296
1884-1889 301
by ages 300

Deaths, 1889 ..... 22-43, 227
1884-1889 228
1884-1889, inclusive, with estimated population and rates 202

at different age periods, 1889 233
by ages and sex, 1884–1889 235
by age, sex, and months 193–195
by ages, sex, and months, by counties 178
by ages, sex, and months, by counties and towns 146–176
by counties, 1884–1889, with rates, according to estimated population. 230
by seasons, 1889 240
causes of, alphabetically arranged, by age, sex, and months 180–192
by classes, 1884–1889 244
by classes and counties, 1889 247
by towns and counties 56–143
diagram showing comparative mortality from twenty causes of 256
from twenty prominent causes, 1884–1889 254
from principal constitutional diseases, 1884–1889 250
developmental diseases, 1884–1889 253
local diseases, 1884–1889 251
zymotic diseases, 1884–1889 249
nativity of decedents, 1889 241
nativity of decedents, 1884–1889 242
nomenclature of causes of 6–16
of centenarians, 1889 243
of children under five years of age, by seasons, 1889 239
of males and females compared, 1884–1889 232
percentages of, at different age periods, 1883–1889 234
by age and sex, to total mortality, 1884–1889 237
by classes, 1884–1889 245
by quarters, 1884–1889 231
to each 1,000 of the population 21
recapitulation of causes of, by classes and orders, by counties 144
Death-rate of the State, 1889 201
1884–1889 228
of various countries 203, 229
Developmental diseases, deaths from prominent, 1884–1889 253
Diarrheal diseases, deaths from, 1884–1889 286
Diphtheria, deaths from, 1884–1889 301
by ages, 1884–1889 296
by ages, sex, and months, particularly in the cities and larger towns, 1889 298
Divorces, causes of, 1882–1889, inclusive, by counties 54
decreed from 1870–1889, by counties 223
in 1889, by counties 53
four leading causes of 220
law regarding 219
ratio of to marriages, 1882–1889 224
by counties, 1889 225
ratio of to total number of marriages, by counties, 1882–1889 226
Dropsy, deaths from, 1889 307

Fever, scarlet, deaths from, 1889 308
by counties 310
1884–1889 308
by ages 309
typhoid, deaths from, 1889 302
1884–1889 303
by ages 306
by counties 304

Heart disease, deaths from, 1889 283

Kidney diseases, deaths from, 1889 306

Local diseases, deaths from principal, 1889 251

Marriages, 1889 ..... 22-43, 208
1880-1889 19
1883-1889, by ages 214
1884-1889, with estimated population and rates 203
by ages and counties, 1889 50
by counties, 1882-1889 212
by counties and nativity, 1889 48
by months and counties 49
by months and quarters, 1883-1889 213
by nativity and percentages, 1882-1889 215
proportion of American to foreign, 1882-1889 216
interesting facts relating to, 1889 52
percentages of American and foreign, by counties, 1882-1889 217
percentages to each 1,000 of the population 21
ratio of to divorces, by counties, 1889 225
ratio of to divorces, 1882-1889 224
ratio of to total number of divorces, by counties, 1882-1889 226
Marriage rate of the State, 1889 201
1882-1889 209
according to estimated population of each year, by counties 212
1883-1889, by months and quarters 213
of various countries 203
Measles, deaths from, 1889 310
from 1884-1889 311
by ages 312

Pneumonia, deaths from, by ages, 1884-1889 280
by counties, 1884-1889 279
by months and quarters, 1884-1889 282
diagram showing mortality from, at different age-periods 281
Population of the State, census of 1880 and 1890 200

Small-pox, deaths from 312
Summary of observations on the causes of death 199-313

Zymotic diseases, deaths from prominent, 1884-1889 249

TABLES.

Table I. Showing births for 1880, 1881, 1882, 1883, 1884, 1885, 1886, 1887, 1888, and 1889 18
I. Showing marriages for 1880, 1881, 1882, 1883, 1884, 1885, 1886, 1887, 1888, and 1889 19
I. Showing deaths for 1880, 1881, 1882, 1883, 1884, 1885, 1886, 1887, 1888, and 1889 20
II. Population of 1890; births, marriages, and deaths, with percentage of each to one thousand of the population, for the year ending December 31, 1889 21

III. Births, marriages, and deaths for the year ending December 31, 1889.. 22–43
IV. Births by counties, showing proportion of males to females, 1889. 44
V. Twin births by months and counties, 1889 45
VI. Births by sex and months, by counties, 1889 46
VII. Marriages by counties and nativity, 1889 48
VIII. Marriages by months and counties, 1889 49
IX. Marriages by ages and counties, 1889 50
X. Interesting facts in relation to marriages, 1889 52
XI. Divorces decreed by the supreme court of New Hampshire, in the year 1889, as returned by the clerks of the several counties 53
XII. Causes upon which divorces were decreed for eight years, 1882–1889, inclusive, by counties 54
XIII. Causes of death, arranged by towns and counties 56–143
XIV. Recapitulation of the causes of death by classes and orders, by counties 144
XV. Deaths by ages, sex, and months, by counties and towns 146–176
XVI. Deaths by ages, sex, and months, by counties 178
XVII. Causes of death alphabetically arranged by ages, sex, and months 180–192
XVIII. Deaths by sex, age, and month 193–195
1. Population of counties in 1880 and 1890 200
2. Estimated population of New Hampshire for each year from 1880 to 1890, inclusive 201
3. Births, marriages, and deaths, with the estimated population and rates, for 1884 to 1889, inclusive 202
4. Rates of births, marriages, and deaths, in various countries 203
5. Births in cities for 1889, with rate per 1,000 205
6. Percentage of American and foreign births, by counties, 1889 207
7. Marriage-rates for 1882 to 1889, inclusive 209
8. Marriages by counties from 1882 to 1889, inclusive 210
9. Marriage-rates for 1882 to 1889, inclusive, according to estimated population of each year, by counties 212
10. Marriages and marriage-rates by months and quarters, from 1883 to 1889, inclusive 213
11. Marriages for seven years, 1883 to 1889, inclusive, by ages 214
12. Marriages according to nativity.—Percentages 1882 to 1889, inclusive 215
13. Proportion of American to foreign born persons married, for 1882 to 1889, inclusive 216
14. Percentages of American and foreign born persons married, by counties, for 1882 to 1889, inclusive 217
15. Divorces decreed from 1870 to 1889, inclusive, by counties 223
16. Ratio of divorces to marriages from 1882 to 1889, inclusive 224
17. Ratio of divorces to marriages, by counties, for 1889 225
18. Ratio of total number of divorces to total number of marriages, by counties, from 1882 to 1889, inclusive 226
19. Deaths and death-rates from 1884 to 1889, inclusive 228
20. Deaths and death-rates, by counties, from 1884 to 1889, inclusive, figured on estimated population 230
21. Percentages of deaths, by quarters, from 1884 to 1889, inclusive 231
22. Mortality of males and females compared, 1884 to 1889, inclusive. 232
23. Deaths at different periods, compared with the number living at the same period, 1889 233
24. Deaths at age periods by percentages, for 1883 to 1889, inclusive 234
25. Deaths by ages and sex, from 1884 to 1889, inclusive 235

26. Percentages of deaths by ages and sex to total mortality, from 1884 to 1889, inclusive 237
27. Deaths of children under five years of age, by seasons, 1889 239
28. Deaths by seasons, 1889 240
29. Nativity of persons deceased for 1889, by counties 241
30. Nativity of persons deceased from 1884 to 1889, inclusive 242
31. Deaths in 1889, aged one hundred years, or more 243
32. Causes of death, by classes, 1884 to 1889, inclusive 244
33. Percentage of causes of death, by classes, 1884 to 1889, inclusive .. 245
34. Causes of death, by classes and counties, 1889 247
35. Mortality from prominent zymotic diseases from 1884 to 1889, inclusive 249
36. Mortality from principal constitutional diseases, 1884 to 1889, inclusive 250
37. Mortality from principal local diseases, 1884 to 1889, inclusive 251
38. Mortality from principal developmental diseases, 1884 to 1889, inclusive 253
39. Mortality from twenty prominent causes, 1884 to 1889, inclusive ... 254
40. Mortality from consumption from 1884 to 1889, inclusive 258
41. Mortality from consumption, by counties, with percentages of deaths to total mortality, from 1884 to 1889, inclusive 262
42. Deaths from pulmonary consumption, by seasons, ages, and nativity, 1889, for the city of Manchester 264
43. Deaths from pulmonary consumption, by seasons, ages, and nativity, 1889, for the city of Concord 265
44. Deaths from pulmonary consumption, by seasons, ages, and nativity, 1889, for the city of Nashua 266
45 Deaths from pulmonary consumption, by seasons, ages, and nativity, 1889, for the city of Portsmouth 267
46. Deaths from pulmonary consumption, by seasons, ages, and nativity, 1889, for the city of Dover 268
47. Deaths from pulmonary consumption, by seasons, ages, and nativity, 1889, for the city of Keene 269
48. Percentage of deaths from consumption to the total mortality of the cities of the State for the years 1883 to 1889, inclusive 270
49. Deaths from consumption, by ages and sex, by counties, for 1889. 272
50. Deaths from consumption, by months and sex, by counties, for 1889 275
51. Deaths from consumption, by nationality, civil condition, and sex, by counties, for 1889 277
52. Mortality from pneumonia, by counties, from 1884 to 1889, inclusive 279
53. Mortality from pneumonia, from 1884 to 1889, inclusive, by ages ... 280
54. Mortality from pneumonia, by months and quarters, from 1884 to 1889, inclusive 282
55. Mortality from brain diseases, 1884 to 1889, inclusive 284
56. Mortality from diarrheal diseases, 1884 to 1889, inclusive 286
57. Mortality from cholera infantum from 1884 to 1889, inclusive 287
58. Mortality from cholera infantum from 1884 to 1889, inclusive, by ages 288
59. Cholera infantum, by cities 289
60. Cholera infantum, by ages, sex, and months, particularly showing the number of decedents in the cities and towns returning the greatest mortality from this disease 291
61. Mortality from cancer, with ratios to estimated population and to total mortality from 1884 to 1889, inclusive 295

62. Mortality from diphtheria from 1884 to 1889, inclusive, by ages.... 296
63. Diphtheria, by ages, sex, and months, particularly showing number of decedents in the cities and towns returning the greatest mortality from this disease..... 298
64. Mortality from croup from 1884 to 1889, inclusive, by ages..... 300
65. Mortality from croup and diphtheria from 1884 to 1889, inclusive.. 301
66. Mortality from typhoid fever from 1884 to 1889, inclusive..... 303
67. Mortality from typhoid fever, by counties, with percentages of deaths to total mortality, from 1884 to 1889, inclusive 304
68. Mortality from typhoid fever from 1884 to 1889, inclusive, by ages 306
69. Mortality from Bright's disease, nephritis, and other kidney diseases, and from dropsy, with ratios to total mortality, from 1884 to 1889, inclusive..... 307
70. Mortality from scarlatina from 1884 to 1889, inclusive..... 308
71. Mortality from scarlatina from 1884 to 1889, inclusive, by ages 309
72. Deaths from scarlatina, by counties, 1889..... 310
73. Mortality from measles from 1884 to 1889, inclusive..... 311
74. Mortality from measles from 1884 to 1889, inclusive, by ages..... 312

EXPERIMENT STATION BUILDING
WORK SHOP
NEW HAMPSHIRE COLLEGE OF
AGRICULTURE AND THE MECHANIC ARTS
CULVER
1866.
HANOVER, N.H.
COWANT HALL
FARM BUILDINGS

NINETEENTH REPORT

OF THE

BOARD OF TRUSTEES

OF THE

COLLEGE OF AGRICULTURE

AND

MECHANIC ARTS

TO THE

NEW HAMPSHIRE LEGISLATURE,

JANUARY SESSION, 1891.

MANCHESTER:
JOHN B. CLARKE, PUBLIC PRINTER.
1890.

BOARD OF TRUSTEES.

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CALENDAR.

1890.

September 4. First term of fifteen weeks began — Thursday morning.
December 17. First term ends — Wednesday noon.

WINTER VACATION OF FOUR WEEKS.

1891.

January 15. Second term of eleven weeks begins — Thursday morning.
April 1. Second term ends — Wednesday noon.

SPRING VACATION OF ONE WEEK.

April 9. Third term of eleven weeks begins — Thursday morning.
June 22-23. Examinations for admission — Monday afternoon and Tuesday.
June 23. { Anniversary — Tuesday.
Meeting of Alumni Association — Tuesday afternoon.

SUMMER VACATION OF TEN WEEKS.

September 1-2. Examinations for admission — Tuesday * afternoon and Wednesday.
September 3. First term of fifteen weeks begins — Thursday morning.
December 16. First term ends — Wednesday noon.

* Candidates will assemble at Library Room in Culver Hall, at 3 o'clock P. M.

REPORT.

To the Honorable Senate and House of Representatives in General Court convened:

The trustees, in submitting their nineteenth report of the financial condition, operations, and progress of the New Hampshire College of Agriculture and the Mechanic Arts, desire first to give expression to their feeling of sorrow for the death of the Hon. George W. Nesmith, whose official connection with the college commenced at or near its organization, and continued in the capacity of trustee and as president of its board until his death the present year. His long, faithful, and efficient services won for him the warmest appreciation of all associated with him and of all friends of industrial education in the State, who will long cherish the memory of his highly useful and virtuous life.

Turning to the financial condition of the institution, the trustees are able to state that it has promptly paid all its expenses and is free from debt. The "Morrill educational bill," passed by the last Congress, marks a new era in the financial history of the college and gives assurance that the immediate future is to witness great improvement, not only in the equipment of all its departments, but also in the number of instructors and the thoroughness and extent of the instruction given. By the terms of the statute, the college will soon receive fifteen thousand dollars for the year ending June 30, 1890, and for the present year the sum of sixteen thousand dollars. This amount will be annually increased a thousand dollars until it reaches twenty-

five thousand dollars per annum, all of which is "to be applied to instruction in branches of mathematical, physical, natural, and economic science, with special reference to their applications in the industries of life, and the facilities for such instruction." It will thus be seen that no part of the above grant from the government can be used for the erection or repair of buildings, or insurance of same, or for the general current expenses of the college, and the appropriation from the State will be as necessary and indispensable as heretofore.

By means of this liberal grant, our laboratories, experiment station, and workshop can be made equal to the best in the country and placed in charge of men of the best talent that money can command. Our experiment station has been conducted by able scholars and investigators and the results have been published and distributed to every farmer in the State who desired to receive them. Much information has thus been diffused among the people which is of an important and helpful character.

A detail of an army officer is soon expected, that the college may be able to comply with the statute requiring military instruction to be given to the students.

Good conduct and diligent attention to study have characterized our students, and those who have graduated we believe to be well prepared to make a successful and honorable record in the avocations in which their chosen life work is to be done.

Much interest has been taken in the department of the mechanic arts both by the trustees and the faculty, and its growing importance has been fully appreciated by them.

The workshop, although but partially equipped, has furnished all the instruction which could be reasonably expected, and most creditable specimens of work have been produced by students in that department. Our enlarged means will enable us to place that department in such completeness as its importance demands.

Ancillary experiments have been carried on in different parts of the State by farmers willing to undertake them, and having facilities for so doing, with a view to furnishing to farmers in all parts of the State information adapted to the locality and conditions peculiar to the same, and good results have been obtained.

It affords the trustees much gratification to be able to report that the college is making progress in the thoroughness of the instruction given and in awakening a deeper interest in the lines of work done by our students. It has been our aim, and will continue to be, not to compete with academies or with Dartmouth College in general education, but to develop to the fullest extent the distinctive lines of agricultural and mechanical science which this class of institutions was designed to promote. We hope to convince every farmer in the State that successful farming must be carried on upon scientific principles, and to lay before him such valuable information from time to time as our experment station can gather by the most careful and ably conducted experiments.

We hail as an auspicious omen the many expressions of appreciation of the work we have in hand, and the increasing good-will entertained for the college by the people of the State. The advantages which we are now able to offer to young men desirous to be thoroughly prepared for the industrial pursuits of life, and those which large means will enable us to provide, should attract to our halls a very much larger number of students.

It is proposed to hold during the coming winter a series of farmers' institutes at such points in the State as will best suit the convenience of the farmers. At these meetings such subjects will be discussed as are likely to prove of practical benefit, and the practical work of the experiment station will be brought to the attention of the public. We believe that more good can be done in this way than by any other method yet adopted. The result of

such institute work in other States has been to popularize the science of agriculture; and we confidently expect that this will meet with approval in this State.

A veterinary surgeon will be added to the faculty, and the science of horticulture will be developed. An opportunity will also be offered to students who desire to take special courses of study in particular lines. The facilities for the study of dairying are already provided.

The name of agricultural college should deter no student from participating in the advantages which it offers in other lines of study. Its object is to educate the industrial classes to produce, and to stimulate and increase production to the highest attainable degree by imparting the most complete knowledge of mechanical science, and, at the present time, of electrical science especially.

No pains will be spared to make this institution emphatically that of the people, entering with zeal into every effort to spread among them helpful knowledge, and promoting their welfare and happiness.

For specific information touching the subjects herein mentioned, reference is made to the reports of the dean, the treasurer, the director of the experiment station, and others, which accompany this report.

L. D. STEVENS, *President,*
in behalf of the Board of Trustees.

REPORT OF TREASURER.

To the President and Trustees of the New Hampshire College of Agriculture and the Mechanic Arts:

Your treasurer respectfully submits his twenty-third annual report for the year ending April 1, 1890.

He charges himself as follows:

Balance in treasury, April 1, 1889 . .	$7,167.12
Income from Conant fund	2,110.00
Interest on New Hampshire bonds . .	4,800.00
State appropriation	3,000.00
Government appropriation	11,250.00
Interest, Merrimack River Savings Bank .	35.05
	$28,362.17

He credits himself as follows:

1889.

April	2.	Paid on order of	Professor	Pettee	$3,750.00
"	2.	"	"	"	1,088.34
"	20.	"	"	"	326.71
May	2.	"	"	"	807.82
June	4.	"	"	"	996.26
July	1.	"	"	"	1,757.46
"	5.	"	"	"	3,750.00
Aug.	2.	"	"	"	518.32
Sept.	6.	"	"	"	519.46
Oct.	1.	"	"	"	3,750.00
"	1.	"	"	"	629.76
Nov.	2.	"	"	"	918.78
Dec.	3.	"	"	"	980.75

1890.			
Jan.	1.	Paid on order of Professor Pettee	$731.71
"	6.	" " "	3,750.00
Feb.	1.	" " "	682.16
March	1.	" " "	280.66
March	31.	" " "	3,029.91
			$28,268.10
Balance		. . . . .	94.07
			$28,362.17

FREDERICK SMYTH, *Treasurer.*

I hereby certify that I have examined the accounts of Frederick Smyth, treasurer of the New Hampshire College of Agriculture and the Mechanic Arts, and find the same correctly cast and properly vouched.

JOSEPH KIDDER, *Auditor.*

APRIL 19, 1890.

CONANT FUND.

RAILROAD STOCK.

104 shares Concord & Montreal Railroad.
45 shares Boston & Lowell Railroad.
40 shares Boston & Maine Railroad.
38 shares Manchester & Lawrence Railroad.
92 shares Fitchburg Railroad.

NATIONAL BANK STOCK.

30 shares Monadnock National Bank.
5 shares Concord National Bank.

Western mortgage loans, $4,500.

REPORT OF THE DEAN.

To the President and Trustees of the New Hampshire College:

The change in the time of making the state reports has caused this record to extend over a different period from that of preceding years. The financial statement, which accompanies this report, is for the year ending March 10, 1890, while the report itself covers the time up to October 1 of the present year.

Steady progress has been made during this period in everything pertaining to the welfare of the college, which is becoming every day better known and appreciated and capable of doing a higher grade of educational work.

The anticipations of the last report, in regard to the experiment station, and the advantages accruing from it to the college, have been more than realized. We are now fully convinced that every instructor should have leisure and opportunity for practical work, in order to be most effectively prepared for the duties of the classroom.

The workshop, also, holds a valued place in the college. The financial report shows the net expense for the year to have been but slightly more than the salaries of the skilled workmen employed to instruct the students. Notwithstanding the comparatively small outlay, considerable progress has been made in equipment. Among the articles wholly, or almost wholly, manufactured in the shop, a saw-table, wood lathe, and two large cases of drawers deserve special mention. Thus far, the practical results of the workshop are highly satisfactory.

August 30, 1890, the Morrill educational bill was passed by Congress, by virtue of which we are to receive an annual appropriation, beginning with $15,000, and increasing by $1,000 each year until it amounts to $25,000. No State, more than ours, needed an appropriation of this kind, and it has come at a time when the college exigencies most require it. As to the disposition of the funds, we may well quote from a recent report to the senate committee on education: "The scientific work required to be done in the courses of instruction and experiment at the colleges which we represent, demands an expensive equipment by way of laboratories, machine-shops, apparatus, experimental farming, etc. Institutions for teaching natural science, it is well understood by all, require a much larger outlay for the 'plant' and for their annual work than do purely literary institutions; and the people of our country have come to demand of the colleges organized under the land-grant act a thoroughness of work in natural science and its applications which shall not suffer when compared with that of the oldest and most richly endowed colleges and universities of the land." This shows how much is needed to well equip a polytechnic school.

The appropriation will enable us to procure many needed appliances in the line of progress. Necessary tools and machinery can now be purchased, although the money for an additional shop building must be obtained from other sources. The first two appropriations, amounting to $31,000, which are to be available within a few months, should be largely devoted to equipping the physical, mechanical, electrical, and chemical laboratories, and the workshop. The recitation rooms will also need to be more completely furnished, and additional books will be required for the library, before any considerable portion of the funds can be spared for salaries. A wise policy will lay a broad foundation now, while we have the means, and will make additions

to the corps of instructors gradually after the equipment is provided and as the exigencies of the time shall require.

In the line of instruction there is an immediate demand for a veterinarian, who, in addition to his classroom duties, would be at hand for consultation in any emergency, like that which has recently arisen at the State Industrial School.

A chair of horticulture should soon be established, as that subject must be developed as one of our specialties.

The chair of electrical engineering must be filled this year, in order that we may be fully equipped for carrying out our new and important course of electrical engineering. The technical portion of this course will include lectures and text-book work on dynamo-electric machinery, on electrical measurements, and on the design, construction, and installation of electric lighting and power plants. Supplementary to these, there will be a thorough course in laboratory work, including the calibration and practical use of ammeters, voltmeters, rheostats, etc. ; the taking of characteristic curves of dynamos, and the determination of the efficiency of motors, of dynamos, and of electric lamps.

No efforts should be spared to render the courses of study pursued the most complete possible, and equal pains should be taken to provide the best quality of instruction and equipment. Nothing short of this will satisfy the people at large, or, more especially, the students whom we wish to attract to our doors. As the work of progress goes on, additional instructors will be required and can be obtained.

In regard to preparation for college, we desire that the advantages of the excellent academies and high schools, scattered over our State, may be enjoyed and utilized by those who propose to study here, in order that their progress after entering may be more rapid and satisfactory. It is generally unwise to hasten one's entrance under eighteen, at the expense of a thorough preparation. The

catalogue advises the study of plane geometry, in addition to the other required studies, and this will prove greatly to the advantage of all students entering. As the institution develops its specialties, it must more and more strengthen its bonds of union and sympathy with "Old Dartmouth," so that all eyes in the State shall turn towards Hanover as the "mother of arts and eloquence."

C. H. PETTEE, *Dean.*

FINANCIAL STATEMENT

For the Year ending March 10, 1890.

CASH ACCOUNT.

Received of treasurer by pay-roll of bills for college	$10,234.44	
Received of treasurer by pay-roll of bills for experiment station to July 1, 1889	7,500.00	
Received of treasurer by pay-roll of bills for experiment station since July 1, 1889	7,500.00	
		$25,234.44
Received from various sources for college	$2,263.86	
Received from various sources for college farm *	5,648.60	
		7,912.46
Total receipts		$33,146.90
Paid college bills	$12,368.63	
college farm bills * . .	5,472.90	
experiment station bills to July 1, 1889 . . .	7,500.00	

* The receipts and expenditures of college farm appear much larger than they actually are because money is advanced from this fund and repaid every quarter to meet pressing bills of experiment station.

Paid experiment station bills since July 1, 1889 . . .	$7,500.00	
		$32,841.53
Cash on hand		$305.37

I hereby certify that I have examined the above accounts of C. H. Pettee, Dean, and find the same correctly cast and properly vouched, and that he has on hand $305.37.

JOSEPH KIDDER, *Auditor.*

DETAILED STATEMENT OF COLLEGE BILLS.

Conant Hall payments . . .	$1,259.68	
Conant Hall receipts . . .	1,083.50	
Net expense		$176.18
Culver Hall payments . . .	$1,154.45	
Culver Hall receipts . . .	577.40	
Net expense		$577.05
Workshop payments . . .	$2,506.28	
Workshop receipts . . .	889.29	
Net expense		$1,616.99
Chemical laboratory payments .	$291.20	
Chemical laboratory receipts . .	22.75	
Net expense		$268.45
Salaries		$6,140.84
Printing		90.85
Advertising		124.42
Trustees' expenses		278.90
Other expenses	$799.59	
Other receipts	19.77	
Other net expenses		779.82
Cash on hand		129.67

C. H. PETTEE, *Dean.*

REPORT OF EXAMINING COMMITTEE, 1890.

To the Board of Trustees of the New Hampshire College of Agriculture and Mechanic Arts:

The committee appointed to be present at the annual examination of 1890, takes pleasure in presenting the following report:

As your committee entered the college, coming in contact with professors and students, it was revealed at once that the right spirit was prevailing in the institution. This fact cannot be emphasized too strongly, for without it the motives and aims cannot be exalted, and, therefore, results are sure to be unsatisfactory.

The first classes examined were in stock-breeding and analytic geometry. The former had been under the instruction of Professors Whitcher and Wood. As the students discussed the various topics assigned them, it was made plain that this branch had not been treated as a farce, or as of trifling importance. By reasoning and illustration they showed its value to the farmers and the people at large. The common-sense views presented, as well as those taken from standard authors, were highly gratifying.

In analytic geometry the students drew the topics which they were to consider and demonstrate. Quickly they were at the blackboards solving the problems and constructing diagrams to exhibit the right line, the circle, the ellipse, the hyperbola, the parabola, and the conic. Then, as one after another was called upon to define terms and

illustrate principles, points, lines, circles, diameters, axes, radii, foci, segments, tangents, conjugates, asymptotes, abscissas, were announced in rapid succession; there was no parrot-talk or guess-work and but few mistakes made. It was proved beyond a question that the students had broken through the tough shell of analytic geometry and were really enjoying its wholesome meat. We judge that none in this class would now be disposed to ask, What is the use of studying higher mathematics? They can now realize how its principles may be applied on the farm and in almost every department of life. Then what surpasses all is the discipline which they have gained by studying this branch. The examination was very satisfactory, giving evidence that Professor Pettee is an efficient instructor, thinking more highly of quality than quantity.

The second classes examined were in political economy and geometry.

In political economy the students appeared as though they had found delights in this branch. As Professor Scott gave out theme after theme the young men discoursed upon value, exchange, production, labor, capital, land, money, currency, trade, credit, and taxation, as though they had devoted time and careful study to these important subjects. Their views in the main seemed to be based upon a sense of right and duty. It was gratifying to discover this to be a prominent feature in the class. They laid more stress upon principle than mere theory. They denounced waste of every kind in emphatic terms. Their conclusion was that we have no right to waste money, time, or opportunity. While they discountenanced penuriousness, they enforced the idea of strict economy under all circumstances. While their showing was good, the substance was better.

The class in geometry, under Professor Kingsbury, made a favorable impression upon the committee. It was soon made clear that the students were familiar with analytical

reasoning, and now as they were dealing with the inductive method they found little difficulty. The parts assigned to each were readily taken and quickly performed. The committee saw no signs of any one's carrying a Euclid in his pocket, as Lord Erskine was wont to do, but they discovered that each carried one in his mind. It was made plain that the students had found no short cut to geometry, but had traveled a royal road adorned with angles, triangles, polygons, circles, surfaces, and solids, whose principles are of real value in practical life.

On the second day of examination the first classes presented to the committee were in English literature and trigonometry.

The students in English literature had manifestly acquainted themselves with many good qualities of authors and their works, and with some that were bad, and the bad possibly were dwelt upon more than their share. It is proper to be critical in studying authors and their productions, but the just critic will dwell first and most upon the good things, and lastly with feelings of regret upon the errors and imperfections. In the citations this rule appeared to be reversed; however, we are inclined to believe that this fault was largely due to the text-book in use.

In plane and spherical trigonometry the young men pursued the abstractions from the simplest definitions to the most complicated properties in an earnest and persistent manner. The mistakes made were few. From the beginning of the subject to the close an unbroken chain of reasoning was followed, whose postulates and syllogisms resulted in exact conclusions. To them logarithms, signs, tangents, complements, and supplements were terms fraught with practical significance.

The next classes presented were in chemistry and botany. Both of these, it was soon shown, had been under the best of instruction. If students in this institution do not become proficient in botany, it certainly will not be

Professor Jesup's fault. He is all alive in the subject and those under his tuition who do not become interested in this branch of learning must be dullards or sycophants. The class generally did themselves much credit. As flowers and plants were placed in their hands they exhibited familiarity with the different parts and readily described them. During another term they are to give special attention to analyzing and mounting different flowers. Each student is required to put into an herbarium a hundred different specimens. The herbariums prepared by the last graduating class are of a high order. The two which took the prizes are elegant. It would not be an easy matter to surpass them.

Professor Morse rendered his examination in chemistry thorough and entertaining. It savored not in the least of any sham. Those under his charge have been taught to pick compounds to pieces and ascertain the elements which enter into the formation of material things. The students in this department have an excellent opportunity to experiment in the laboratory.

The specimen sheets of mechanical drawings under the professor in mechanical engineering were fine. In this work the eye is being trained to see things just as they are, the hand is being made perfectly submissive to the will, and the mind is being educated to admire and appreciate the beauty of forms.

After these examinations, the committee was conducted to the workshop, where students in their shirt-sleeves were pushing the plane and saw, welding links of chain at the anvil, turning and smoothing iron-arbors, cutting screws, and fitting bolts. Here the young men were applying theories to practice, and becoming skilled as practical mechanics. In this way they were securing needed exercise, as much so as they could in playing tennis, batting the ball, performing in the gymnasium ; and in addition they were acquiring skill to construct things useful and beautiful

for the home, the farm, and the shop. The students are employed here for some two hours a day for four days in the week. The work is under the direction of competent overseers, who manifest a deep interest in the welfare of the students. This department is to be warmly commended, and of necessity in this age of invention and construction will become more highly prized as our people learn of its results. The young men appeared as if they enjoyed this part of their college curriculum. This experience to them will prove far better than two hours of daily military drill, for it is training them for peace and not war, for breaking up the soil with the plow instead of the cannon. It is educating them to save time and improve every opportunity.

From the workshop we crossed rich meadows belonging to the college farm to the experiment station, where we found commodious buildings, and experiments going on under the charge of Professor Whitcher which are of vital importance to every farmer in our State and country. This department must be seen to be appreciated. Its laboratory is a busy place, where milk is being tested, soils and fodder analyzed, fertilizers examined, and so the best cows, soils, plant food, and composts are being discovered. Here new truth is being opened up and so applied as to benefit all. Should ancient Greece proffer us her best gift, it would be beauty, but here are presented both the useful and the beautiful. The business carried on in this establishment is of special interest to our laboring people. Already we have been greatly benefited by the experiments made and results reached, and in the years to come we are to realize still richer rewards from this station. The bulletins sent out from it to the tillers of the soil are of immense value, expelling ignorance and dispensing knowledge.

In the evening of the second day of the examinations, the oratorical contest established by ex-Governor Smyth, of Manchester, occurred. There were five readers and five declaimers who took part in these exercises, doing them-

selves credit and highly entertaining a large and attentive audience. Joseph F. Preston took the first prize, Edward P. Stone second, and Ernest C. Cole third, in speaking. Charles P. Brown in reading took first prize, Walton F. Britton and Charles E. Hewitt the second. No other branches are more difficult to master than reading and speaking, and yet it is too often the case that these receive the least attention in our higher institutions of learning. How unlike is most of the reading and speaking to good talking, and still they should be quite the same. Oratory is an art, and good oratory is one of the fine arts. Let this work go on and graduates from this college will rank high as readers and public speakers.

In conclusion, your committee, after two days' experience in witnessing the results of the work being done in the New Hampshire College of Agriculture and the Mechanic Arts, can but speak of it in terms of praise, and heartily commend it to the confidence of our people as deserving of patronage. It is favorably situated and well equipped for doing a grand service to our State. We should look upon it as our institution, fostering and encouraging it in every possible way. It should have in attendance many more students, and will have, as the people come to know and appreciate its advantages. If it is not all we could wish it to be, we should not complain of it and then remain indifferent, but we should endeavor to remove the hindrances and speed it forward. Let our sons who are to follow the noble vocation of farming, or in any way assist in the development of the material resources of the State, be trained and cultured in this institution, and they will be likely to dignify their calling, making it most honorable to hold the plow, sow the seed, and reap the harvest. Not only will they be prepared to cultivate the soil, but well fitted, should circumstances favor and demand it, to pursue studies which will qualify them for other pursuits. They will be quite sure to go out of this college with sound bodies, cultivated minds, and good moral characters.

S. H. M'Collester, D. D.
Alonzo Towle, M. D.
William P. Ballard, B. S

CATALOGUE

OF THE

NEW HAMPSHIRE

COLLEGE OF AGRICULTURE AND THE MECHANIC ARTS,

1889-1890.*

At the session of the Legislature of New Hampshire in 1866, an act was passed establishing the "New Hampshire College of Agriculture and the Mechanic Arts," on the basis of the congressional land grant, and authorizing its location in Hanover, and connection with Dartmouth College.

In accordance with this act, the institution was organized under a board of trustees appointed partly by the Governor and Council, and partly by the corporation of Dartmouth College, the authorized connection with Dartmouth College was effected, and the institution is now in successful operation.

The act of Congress, by virtue of which it was established, provides that its "leading objects shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts . . . . in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life."

* As the report previous to this was made May 1, 1889, this catalogue necessarily contains the names of all students connected with the college between May 1, 1889, and October 1, 1890.

An act of Congress, approved August 30, 1890, provides an additional appropriation, which for the present year is sixteen thousand dollars, and is to be increased until it becomes twenty-five thousand dollars a year. This money is to be applied "to instruction in agriculture, the mechanic arts, the English language, and the various branches of mathematical, physical, natural, and economic science, with special reference to their applications in the industries of life; and to the facilities for such instruction.

The college is carrying out the provisions of these acts in the following ways: First, it gives a practical and scientific education which is of use in all the industrial pursuits. Second, it gives four special courses of study: 1. The Course in Agriculture; 2. The Course in Chemistry; 3. The Course in Mechanical Engineering; 4. The Course in Electrical Engineering. The fourth course has just been established and will be open to students at the beginning of the next collegiate year.

FACULTY.

REV. SAMUEL C. BARTLETT, D. D., LL.D., *President.*

CHARLES H. PETTEE, A. M., C. E., *Dean, and Professor of Mathematics and Civil Engineering.*

REV. HENRY G. JESUP, A. M., *Professor of Natural History.*

CLARENCE W. SCOTT, A. M., *Professor of the English Language and Literature.*

GEORGE H. WHITCHER, B. S., *Professor of Agriculture.*

ALBERT H. WOOD, B. S., *Associate Professor of Agriculture.*

FRED W. MORSE, B. S., *Professor of Chemistry.*

CHARLES L. PARSONS, B. S., *Associate Professor of Chemistry.*

GEORGE LEONARD TEEPLE, M. E., *Instructor in Mechanical Engineering and Physics.*

CHARLES H. HITCHCOCK, PH. D., *Instructor in Geology.*

LOUIS POLLENS, A. M., *Instructor in French and German.*

SAURIN J. BLANPIED, A. M., *Instructor in Elocution.*

JOHN N. BROWN, *Foreman of Machine Work.*
ALLEN G. LOWELL, *Foreman of Wood Work.*

STUDENTS.

CLASS OF 1889.

Name.	Residence.	Room.
Colby, Fred Harvey,	Hopkinton, N. H.,	C. H. 7.
Hutchinson, Louis John,	Norwich, Vt.,	C. H. 9.
Gillis, Linwood Carroll,	Manchester, N. H.,	A. H. 1.
Norris, John Lawrence,	Lyme, N. H.,	C. H. 7.
Scott, Charles Walter Earl,	Winchester, N. H.,	Mr. Preston's.
Stone, David Elmer,	Hartford, Vt.,	Farmhouse.
Washburn, Fred,	West Springfield, N. H.,	C. H. 4.

CLASS OF 1890.

Hardy, Edward Dana,	Hebron, N. H.,	A. H. 6.
Jewett, John Young,	Gilford, N. H.,	C. H. 8.
Pike, Edwin Mahlon,*	Hanover, N. H.,	C. H. B.
Preston, Joseph Franklin,	Hanover, N. H.,	Mr. Preston's.
Sanborn, Elihu Quimby,	Webster, N. H.,	A. H. 6.
Slack, Clarence Ira,	Norwich, Vt.,	C. H. 9.

CLASS OF 1891.

Bickford, Fred Henry,	Piermont, N. H.,	C. H. 10.
Cole, Ernest Gowell,	Hampton, N. H.,	A. H. 4.
Everett, Russell Marden,	Chester, N. H.,	C. H. 13.
Kaleher, William Edward,†	Hanover, N. H.,	Mr. Kaleher's.
Leavitt, Frank Elmer,	Hampton, N. H.,	C. H. 10.
Stone, Edward Payson,	Canaan Center, N. H.,	C. H. B.
Symonds, Henry Allin,	Hancock, N. H.,	C. H. 10.
Viau, Philius,	Hanover, N. H.,	Mr. Viau's.

CLASS OF 1892.

Barker, Percy Lovejoy,	Milford, N. H.,	C. H. 7.
Brown, Charles Patten,†	Hanover, N. H.,	Mr. Brown's.
Fuller, Fred Driggs,	Hanover, N. H.,	Mr. Fuller's.

* Special Course. † Partial Course.

Hall, Harry Hibbard,*	Lisbon, N. H.,	C. H. 15.
Harriman, Henry Daniel,	Littleton, N. H.,	A. H. 5.
Hough, Arthur Bennerzett,	Lebanon, N. H.,	C. H. 7.
Hutchinson, Charles Martin,	Norwich, Vt.,	C. H. 9.
Kilburn, Sidney Gerrish,	Andover, N. H.,	C. H. 6.
Stone, Edward Monroe,†	Marlborough, N. H.,	C. H. 15.
Viau, Joseph,	Hanover, N. H.,	Mr. Viau's.

CLASS OF 1893.

Asadoorian, Avedis Martin,*	Oorfa, Turkey,	Thompson House
Britton, Wilton Everett,	Keene, N. H.,	C. H. 9.
Bryant, Frank John,	Enfield, N. H.,	A. H. 1.
Burbank, John Hale,	Deerfield, N. H.,	A. H. 6.
Fifield, John Proctor,	Andover, N. H.,	A. H. 5.
Fitts, George Dexter,	Hanover Center, N. H.,	A. H. 1.
Freeman, George Washington,	Saco, Me.,	C. H. B.
Hewitt, Charles Elbert,	Hanover, N. H.,	C. H. 9.
Higgins, Josiah Brown,	Canterbury Depot, N. H.,	A. H. 4.
Hubbard, Charles Lincoln,	Fitzwilliam, N. H.,	C. H. 12.
James, Orrin Moses,	Northwood, N. H.,	A. H. 6.
Mason, Erskine,	Stamford, Conn.,	C. H. 6.
Smith, Arthur Whitmore,	Hartford, Vt.,	C. H. 6.
Stone, William Payson,	Hanover, N. H.,	C. H. 7.

CLASS OF 1894.

Allen, Edward William,	Ashuelot, N. H.,	A. H. 3.
Barden, Herbert Daniel,	Lebanon, N. H.,	A. H. 3.
Berry, Walter Lincoln,	Lebanon, N. H.,	A. H. 5.
Brown, Bert Sargent,	Hanover, N. H.,	Mr. Brown's.
Clark, Joseph Roger,	Derry, N. H.,	A. H. 2.
Culver, Arthur Charles,	West Lebanon, N. H.,	A. H. 3.
Davis, Ernest Solomon,	South Londonderry, Vt.,	A. H. 4.
Fuller, Albert Eugene,	South Londonderry, Vt.,	A. H. 4.
Gunn, Fred Willis,	Keene, N. H.,	A. H. 6.
Haskell, Fred William,	Lebanon, N. H.,	A. H. 5.
Hill, Henry Elmer,	Plainfield, Vt.,	A. H. 2.
Peck, Philip Fletcher,	Marlborough, N. H.,	C. H. 11.
Russell, William Fenno,	Lebanon, N. H.,	Mr. Lowell's.
Swallow, Frank Herbert,	Hollis, N. H.,	Mr. Lowell's.
Trow, Charles Arthur,	Mt. Vernon, N. H.,	C. H. 11.

* Special Course. † Partial Course.

SUMMARY, 1889–1890.

Class of 1889	7
Class of 1890	6
Class of 1891	8
Class of 1892	10
Class of 1893	14
Class of 1894	15
Total, May, 1889, to October, 1890	60

ADMISSION.

Candidates for the first year must present testimonials of good moral character, and must pass an examination in arithmetic, algebra through simple equations, English grammar, geography, physiology, and American history. It is recommended they be also prepared in plane geometry. A thorough mathematical preparation is especially needed by those who intend to take advanced mathematical studies.

Candidates for advanced standing are also examined in the studies that have been pursued by the class which they propose to enter.

A certificate from any academy or high school will be accepted in place of an examination, upon any subject required for admission to the first year. Every certificate must state the amount of work done by the student, his proficiency, and the text-books used; and in case it is not evident that the student is thoroughly prepared, an examination will be required.

COURSES OF STUDY.

For condensed tables of courses, see pp. 34–36.

COURSE IN AGRICULTURE.

First Year.

FIRST TERM.

Grecian History (Myers): Roman History (Allen).
Algebra (Quimby): Chemistry of Farm (Warrington).
Free-hand or Mechanical Drawing: Shop-work; — Joinery.

SECOND TERM.

Mediæval and Modern History (Myers): Themes in History.
Geometry (Olney); Advanced Course in Geometry.
Drawing: Shop-work; — Joinery: Botany (Gray).

THIRD TERM.

Rhetoric (A. S. Hill); Themes: English Literature (Shaw).
Plane and Spherical Trigonometry (Olney).
Botany (Gray's Lessons and Manual); Field-work.

Second Year.

FIRST TERM.

Zoölogy (Orton): Insects Injurious to Farm (Treat).
Inorganic Chemistry (Remsen): Shop-work; — Pattern-Making.
Rhetoric (A. S. Hill): English Literature (Shaw): Mechanical Drawing.

SECOND TERM.

Stock-breeding (Miles): Breeds of Stock: Rocks and Soils.
Inorganic Chemistry with Laboratory-work: Shop-work; — Forge-work.
Mechanical Drawing: Surveying (Murray).

THIRD TERM.

Rocks and Soils: Drainage: Meteorology (Loomis).
Mineralogy; Laboratory-work: Shop-work; — Machine Construction.
Surveying (Murray); Field-work.

JUNIOR YEAR.

FIRST TERM.

Structural Botany; —Laboratory-work: How Crops Grow (Johnson).
Chemistry; — Qualitative Analysis: Elementary Mechanics (Lodge).
French; — Grammar and Selections [*elective*].
English Literature (Advanced Course) [*elective*].

SECOND TERM.

How Crops Grow (Johnson): Stock-feeding (Armsby).
Chemistry; — Qualitative Analysis: Physics.
French; — *La France* [*elective*].
Constitutional Law (Pomeroy) [*elective*].

THIRD TERM.

Forestry (Hough); Lectures: Physics.
Organic Chemistry with Laboratory-work: Microscopy.
French; — Selections from Agricultural Writers [*elective*].
American Literature [*elective*].

SENIOR YEAR.

FIRST TERM.

Laws of Business (Parsons): Roads and Streets (Gilmore): Sanitary Engineering.
Physics; — Laboratory-work: Dairy Chemistry; — Laboratory-work: Dairying.
German; — Grammar and Selections [*elective*].
Veterinary Anatomy and Physiology [*elective*].

SECOND TERM.

Astronomy (Young).
Applied Agriculture: American Political History.
German; — Selections from Scientific Writers [*elective*].
Veterinary Medicine and Surgery [*elective*].

THIRD TERM.

Political Economy (Perry); Lectures.
Bee-keeping: Experimental Agriculture.
Veterinary Medicine and Surgery [*elective*].
Veterinary Medicine, short course [*elective*].

COURSE IN CHEMISTRY.

For three years this course is the same as the Course in Agriculture.

Senior Year.

FIRST TERM.

Laws of Business: Roads (Gilmore): Sanitary Engineering.
Chemical Physics: Chemistry; — Quantitative Analysis: Physics; — Laboratory-work.
German; — Grammar and Selections.

SECOND TERM.

Astronomy (Young).
Chemistry; — Quantitative Analysis: American Political History.
German; — Selections from Scientific Writers.

THIRD TERM.

Political Economy (Perry); Lectures.
Applied Chemistry; — Lectures and Recitations.
Chemistry; — Quantitative Analysis.

COURSE IN MECHANICAL ENGINEERING.

First Year.

FIRST TERM.

Grecian History (Myers): Roman History (Allen).
Algebra (Quimby); Theory of Equations.
Free-hand or Mechanical Drawing: Shop-work; — Joinery.

SECOND TERM.

Mediæval and Modern History (Myers); Themes in History.
Geometry (Olney); Advanced Course in Geometry.
Drawing: Shop-work; — Joinery.

THIRD TERM.

Rhetoric (Hill); Themes: English Literature (Shaw).
Plane and Spherical Trigonometry (Olney).
Drawing: Shop-work; — Pattern-making.

SECOND YEAR.

FIRST TERM.

Analytic Geometry (Hardy): Differential Calculus (Hardy).
Inorganic Chemistry (Remsen): Shop-work; — Forge-work.
Rhetoric (A. S. Hill); Themes: English Literature (Shaw): Drawing.

SECOND TERM.

Differential and Integral Calculus (Hardy).
Inorganic Chemistry with Laboratory-work: Shop-work; — Forge-work.
Mechanism (Stahl and Woods): Drawing: Surveying (Murray).

THIRD TERM.

Integral Calculus (Hardy); Applications to Advanced General Geometry.
Mineralogy; — Laboratory-work: Shop-work; — Moulding.
Surveying (Murray); Field-work.

JUNIOR YEAR.

FIRST TERM.

Descriptive Geometry (Church): Mechanical Drawing.
Mechanics; Heat (Garnett): Shop-work; — Machine Construction.
French; — Grammar and Selections [*elective*].
Chemistry; — Qualitative Analysis [*elective*].

SECOND TERM.

Mechanics of Engineering (Church).
Electricity and Magnetism (Thompson): Shop-work; — Machine Construction.
French; — *La France* [*elective*].
Chemistry; — Qualitative Analysis [*elective*].

THIRD TERM.

Mechanics of Engineering (Church).
Sound and Light: Shop-work; — Machine Construction.
American Literature [*elective*].
Organic Chemistry; — Recitations with Laboratory-work [*elective*].
French; — Selections from Scientific Writers [*elective*].

SENIOR YEAR.

FIRST TERM.

Materials of Construction: Thermo-dynamics (Wood).
Physics; — Laboratory-work: Drawing: Shop-work; — Machine Construction.
German; — Grammar and Selections [*elective*].
English Literature (Advanced Course) [*elective*].

SECOND TERM.

Thermo-dynamics and Heat Motors (Wood).
Machine Design: Shop-work; — Machine Construction.
German; — Selections from Scientific Writers [*elective*].
Constitutional Law (Pomeroy) [*elective*].

THIRD TERM.

Political Economy (Perry); Lectures.
Machine Design: Shop-work; Machine Construction.
Experimental Work with Indicators, Governors, etc.

COURSE IN ELECTRICAL ENGINEERING.

This course is a branch of that in Mechanical Engineering, and is the same as that course for three years.

SENIOR YEAR.

FIRST TERM.

Materials of Construction: Thermo-dynamics (Wood).
Electricity; — Laboratory-work: Shop-work; — Machine Construction.
German; — Grammar and Selections [*elective*].
English Literature (Advanced Course) [*elective*].

SECOND TERM.

Thermo-dynamics (Wood): Dynamo-machines (Thompson).
Machine Design: Electricity; — Laboratory-work.
German; — Selections from Scientific Writers [*elective*].
Constitutional Law (Pomeroy) [*elective*].

THIRD TERM.

Political Economy (Perry); Lectures.
Electrical Design: Electricity; — Laboratory-work.
Electrical Construction; — Lectures and Experiments.

Work in elocution during the course and original declamations during Junior and Senior years.

A Biblical exercise for all the classes is attended on Sunday afternoons.

Arrangements are being made for instruction in military science and tactics.

EXAMINATIONS. — There will be an examination whenever a subject is completed, and at the end of each term. All examinations will be written, excepting those at the end of the second term, which will be oral, and in the presence of a committee appointed by the faculty.

OUTLINE OF COURSE IN AGRICULTURE.

	First Term.	Second Term.	Third Term.	
A. M.	Grecian History, 38; Roman History, 37.	Mediæval and Modern History, 55.	Rhetoric, 20; English Literature, 30.	FIRST YEAR.
	Algebra, 65; Chemistry of Farm, 25.	Geometry, 66.	Trigonometry, 60.	
P. M.	Drawing, 30; Shop-work, 30.	Drawing, 16; Shop-work, 16; Botany, 12.	Botany, 40.	
A. M.	Zoölogy, 45; Insects, 30.	Stock Breeding, 20; Breeds of Stock, 25; Rocks and Soils, 10.	Rocks and Soils, 15; Drainage, 10; Meteorology, 25.	SECOND YEAR.
	Chemistry, 45; Shop-work, 45.	Chemistry, 33; Shop-work, 33.	Mineralogy, 30; Shop-work, 30.	
P. M.	Rhetoric, 15; English Literature, 30; Drawing, 15.	Drawing, 32; Surveying, 12.	Surveying, 40.	
A. M.	Structural Botany, 45; How Crops Grow, 30.	How Crops Grow, 15; Stock Feeding, 40.	Forestry, 20; Physics, 30.	JUNIOR YEAR.
	Mechanics, 30; Chemistry, 60.	Physics, 22; Chemistry, 44.	Chemistry, 40; Microscopy, 20.	
P. M.	{ French, 60. English Literature, 60.	{ French, 44. Constitutional Law, 44.	{ French, 40. American Literature, 40.	
A. M.	Laws of Business, 40; Roads, 20; Sanitary Engineering, 15.	Astronomy, 55.	Political Economy, 50.	SENIOR YEAR.
	Physics, 30; Dairy Chemistry, 30; Dairying, 30.	Political History, 22; Applied Agriculture, 44.	Bee-keeping, 20; Experimental Agriculture, 20.	
P. M.	{ German, 60. Veterinary Medicine, 60.	{ German, 44. Veterinary Medicine, 44.	{ Veterinary Medicine, 40. Veterinary Medicine (Short Course), 40.	

This outline shows the number of exercises given to each subject, and the arrangement of subjects. Those elective with each other are in braces.

For details see Courses of Study, pp. 28–33.

OUTLINE OF COURSE IN MECHANICAL ENGINEERING.

	First Term.	Second Term.	Third Term.	
A. M.	Grecian History, 38; Roman History, 37.	Mediæval and Modern History, 55.	Rhetoric, 20; English Literature, 30.	FIRST YEAR.
	Algebra; Theory of Equations, 90.	Geometry, 66.	Trigonometry, 60.	
P. M.	Drawing, 30; Shop-work, 30.	Drawing, 22; Shop-work, 22.	Drawing, 20; Shop-work, 20.	
A. M.	Analytic Geometry, and Calculus, 75.	Calculus, 55.	Calculus, 50.	SECOND YEAR.
	Chemistry, 45; Shop-work, 45.	Chemistry, 33; Shop-work, 33.	Mineralogy, 30; Shop-work, 30.	
P. M.	Rhetoric, 15; English Literature, 30; Drawing, 15.	Mechanism and Drawing, 32; Surveying, 12.	Surveying, 40.	
A. M.	Descriptive Geometry, and Drawing, 75.	Mechanics of Engineering, 55.	Mechanics of Engineering, 50.	JUNIOR YEAR.
A. M. and P. M.	Mechanics and Heat, 60; Shop-work, 30.	Electricity and Magnetism, 44; Shop-work, 22.	Sound and Light, 40; Shop-work, 20.	
	{ French, 60. Chemistry, 60.	{ French, 44. Chemistry, 44.	{ French, 40. American Literature, 40. Chemistry, 40.	
A. M.	Materials of Construction, 40; Thermodynamics, 35.	Thermo-dynamics, and Heat Motors, 55.	Political Economy, 50.	SENIOR YEAR.
A. M. and P. M.	Laboratory-work in Physics; and Drawing, 45; Shop-work, 45.	Machine Design, 33; Shop-work, 33.	Machine Design, 30; Shop-work, 30.	
	{ German, 60. English Literature, 60.	{ German, 44. Constitutional Law, 44.	Experimental work, 40.	

This outline shows the number of exercises given to each subject, and the arrangement of subjects. Those elective with each other are in braces.

For details see Courses of Study, pp. 28–33.

OUTLINE OF COURSE IN ELECTRICAL ENGINEERING.

[For three years this course is the same as that in Mechanical Engineering.]

	First Term.	Second Term.	Third Term.	
A. M.	Materials of Construction, 40; Thermo-dynamics, 35.	Thermo-dynamics, 15; Dynamo-Machines, 40.	Political Economy, 50.	SENIOR YEAR.
A. M.	Laboratory-work in Electricity, 45; Shop-work, 45.	Machine Design, 33; Laboratory-work in Electricity, 33.	Electrical Design, 30; Laboratory-work in Electricity, 30.	
and P. M.	{ German, 60. English Literature, 60.	{ German, 44. Constitutional Law, 44.	Electrical Construction, 40.	

This outline shows the number of exercises given to each subject, and the arrangement of subjects. Those elective with each other are in braces.

For details see Courses of Study, pp. 28–33.

OUTLINE OF COURSE IN CHEMISTRY.

[For three years this course is the same as that in Agriculture.]

	First Term.	Second Term.	Third Term.	
A. M.	Laws of Business, 40; Roads, 20; Sanitary Engineering, 15.	Astronomy, 55.	Political Economy, 50.	SENIOR YEAR.
A. M	Quantitative Analysis, 60; Laboratory-work in Physics, 30.	Quantitative Analysis, 44; American Political History, 22.	Applied Chemistry, 60.	
and P. M.	German, 60.	German, 44.	Quantitative Analysis, 40.	

This outline shows the number of exercises given to each subject.

For details see Courses of Study, pp. 28–33.

PRIZES.

I. The Smyth Prizes. — Hon. Frederick Smyth, of Manchester, N. H., offers two prizes in the Senior and Junior classes, one of twenty and the other of ten dollars, for the best essays on subjects connected with agriculture or the mechanic arts ; also three prizes, one of twenty, one of fifteen, and one of ten dollars, for excellence in oratory, open to the upper classes ; also two prizes, one of fifteen and one of ten dollars, to the lower classes for reading.

II. Jesup Prizes. — Professor Jesup offers to the class in botany two prizes, amounting to twenty dollars, for the two best herbariums.

III. Alumni Prize. — This is not to be awarded during the present year.

IV. Bailey Prize. — Dr. C. H. Bailey, of Gardner, Mass., and E. A. Bailey, B. S., of Winchendon, Mass., offer a prize of ten dollars for proficiency in chemistry.

DEGREE.

The degree of Bachelor of Science will be conferred upon those who complete the entire course and pass the final examination. Each candidate for a degree must prepare a thesis on some subject relating to agriculture or to the mechanic arts.

BUILDINGS, APPARATUS, AND FARM.

Culver Hall. — Culver Hall is a brick building, four stories in height, and contains a large chemical laboratory, recitation and lecture rooms, and rooms for the various museums and cabinets.

Conant Hall. — Conant Hall, also of brick, contains a large boarding establishment. It is heated by steam, and has three floors devoted to rooms for students. Allen Hall also contains rooms for students.

State Museum. — A state museum of general and applied science has been established. The specimens accruing from the state geological survey have been devoted to this institution by the Legislature. Various contributions have also been made by persons interested in this subject, and others are solicited.

Chemical Laboratory. — The chemical laboratory is commodious, well lighted and ventilated, and is furnished with appliances for instruction in general, analytical, and agricultural chemistry.

Library. — As the library of this institution is in connection with the library of Dartmouth College, students have the full use of well-stocked reading-rooms, and a library containing over seventy thousand volumes.

Instruments and Apparatus. — The college is provided with approved instruments for practical surveying. A considerable part of the large congressional appropriation of the present year is to be expended in providing thoroughly equipped laboratories for instruction in mechanics, physics, and electrical engineering.

Workshop. — The workshop occupies a building fifty by thirty feet, containing forge-room, wood-working and tool rooms, and a room for machine-work. It is provided with power, tools, and machinery. The plan pursued is to

CULVER HALL

engage in work on articles which give the necessary practice, and will be, when completed, of practical value. During the past year a wood lathe has been designed and constructed, all pattern-making and other work, except casting, being done in the shop. Plans are being matured for the erection of an additional building, and for providing a largely increased amount of machinery.

College Farm. — The farm, consisting of 360 acres of valuable land in the immediate vicinity of Conant Hall, was presented by the late Hon. John Conant, of Jaffrey. It is used as an agricultural experiment station, and is provided with suitable stock, machinery, and buildings. It also furnishes opportunity to the students for remunerative labor.

PECUNIARY AID AND EXPENSES.

Pecuniary Aid. — Thirty-four scholarships, twelve for the State and twenty-two for Cheshire county, will furnish the tuition for an equal number of students. These scholarships and a legislative appropriation make it possible to offer free tuition to all students in the State.

Additional assistance, partly on room-rent, is allowed in certain cases. This is given for the purpose of aiding deserving students, and will be withdrawn from those who use tobacco or intoxicating liquors, or show themselves not deserving.

Monitorships, janitorships, work on the farm, etc., also furnish assistance to a considerable extent.

By these various means and by teaching during the winter, students in a few cases pay all their expenses.

Expenses may be estimated as follows :

Tuition	Free.	$30.00
Library and reading-room tax . .	$6.00	6.00

Room-rent, including steam heating or fuel	$18.00	to	$30.00
Board, from $2.70* to $3 per week, for 37 weeks	100.00	to	111.00
	$124.00		$177.00

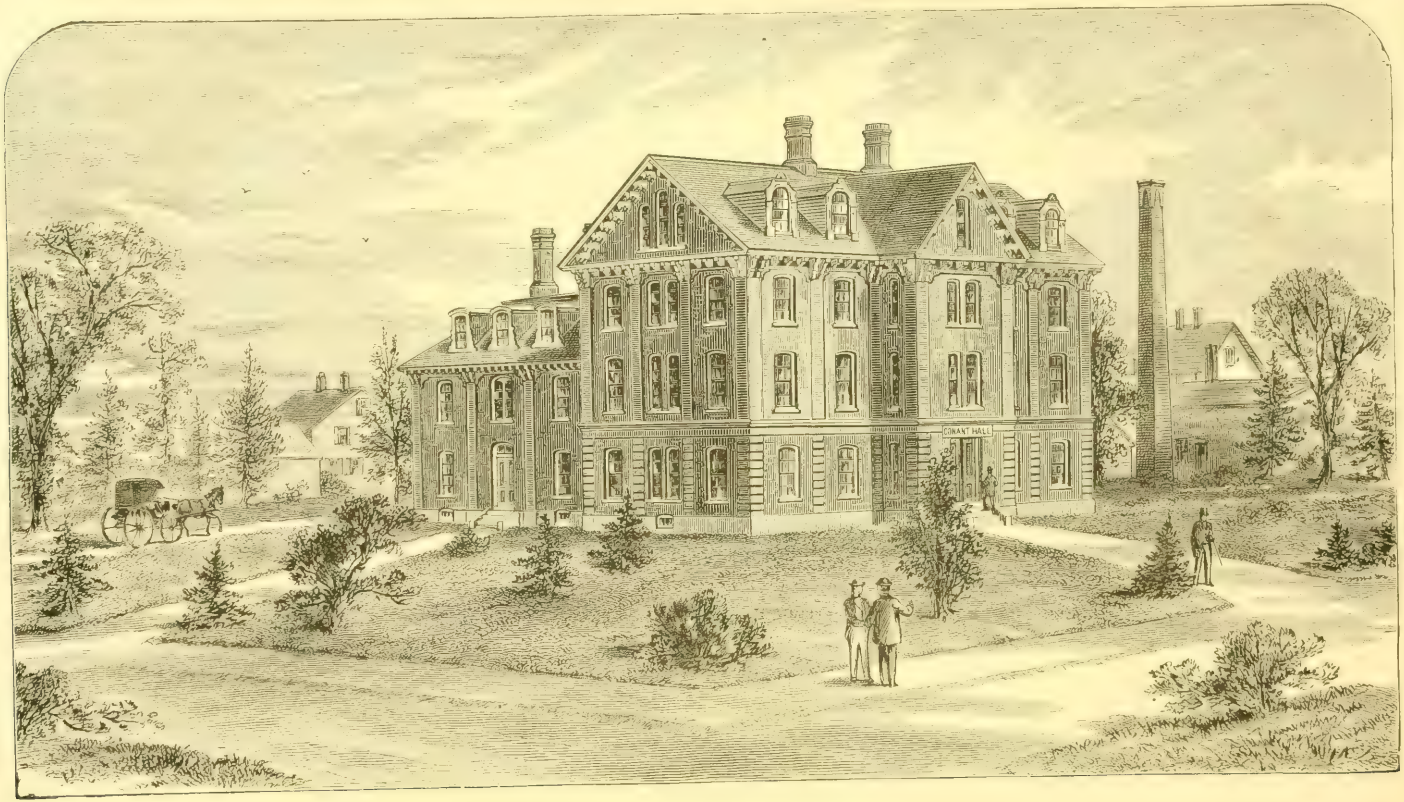
Room-rent is estimated on the supposition that two students occupy the same room.

Washing costs from twenty-five to fifty cents per week. Rooms are unfurnished. Students bring bed linen and blankets; second-hand furniture can be bought at low prices, and sold at a slight reduction.

The cost of text-books, if obtained new, is about $12 per year. As most of the students sell part of their books, the actual expense is from $6 to $10 per year.

For further information, address President Bartlett, or Prof. C. H. Pettee, Hanover, N. H.

* Payable once in four weeks in advance.



CONANT HALL.

NEW HAMPSHIRE AGRICULTURAL EXPERIMENT STATION.

This branch of the college is provided for by the national government at an annual expense of fifteen thousand dollars. In addition to the value of the station to the agricultural interests of the State, it supplements the work of the classroom, and secures the presence of a number of trained specialists, who are also employed as instructors in agriculture.

The college farm has been devoted to the uses of the station, and recently there has been erected a commodious brick building, containing a large chemical laboratory and offices suitable for the work to be carried on.

The act of Congress provides —

That it shall be the object and duty of said experiment stations to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with the remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective States or Territories.

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SYDNEY B. WHITTEMORE, ESQ. . . Colebrook.
HON. GEORGE A. WASON . . . Nashua.
PROF. GEO. H. WHITCHER, *Secretary* . Hanover.

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CHARLES L. PARSONS, B. S., *Assistant Chemist.*
HERBERT H. LAMSON, M. D., *Microscopist and Photographer.*
JOHN M. FULLER, ESQ., *Station Farmer.*
CHARLES WHITCHER, *Clerk.*

ENTRANCE EXAMINATION PAPERS.

I. ENGLISH.

Use great care in regard to penmanship, spelling, capital letters, and punctuation.

1. Name the various classes of nouns.

2. What form of expression can be substituted for the possessive case?

3. Inflect throughout the pronouns of the third person.

4. Give the third person singular of the verb *teach* in all the modes and tenses of the passive voice.

5. Write a complex sentence with a subordinate clause in the subjunctive mode.

6. Analyze the following: "'*Courage!*' *he said, and pointed toward the land.*"

7. Parse the preceding sentence.

8. Write a composition on one of the following subjects: *Cheap Literature*; *A Day at a Fair*; *The French and Indian War.*

II. GEOGRAPHY.

1. Name the five principal countries of Europe in the order of (1) their size, (2) their population, (3) their wealth.

2. Name the capitals of these five countries; give their principal cities, rivers, and mountains.

3. Bound the State of Montana: name two of its most important cities; describe the principal rivers in or on its borders.

4. Locate each of the following islands: Tasmania, Celebes, Ceylon, Candia, Gothland.

5. Locate each of the following seas: Marmora, Aral, North, Baltic, Ionian.

6. Locate each of the following mountains: Hindoo Koosh, Cantabrian, Sierra Madre, Kuen-Lun, Altai.

7. Locate each of the following cities: Belfast, Cadiz, Tangier, Bordeaux, Sydney.

8. Locate each of the following rivers: Dnieper, Niger, Livingston, Zambesi, Yellowstone.

III. AMERICAN HISTORY.

1. When, where, and by whom were permanent settlements made in North America prior to 1621?

2. Give a brief account of the conquest of Mexico by the Spanish.

3. State what explorations and settlements were made by the French in North America prior to 1750.

4. When and from whom did the United States acquire Louisiana? Florida? Alaska?

5. Give an outline of Jackson's administration.

6. Give an account of the Missouri Compromise.

7. Give an account of the military operations which closed the Civil War.

IV. PHYSIOLOGY.

1. Draw diagrams of the permanent teeth on one side of the upper jaw, and give their names. State the differences in number and character between milk teeth and permanent teeth.

2. Draw an outline diagram of the alimentary canal, and name its parts.

3. Of what is the diaphragm composed? Draw diagrams showing its condition before and after inspiration.

4. What digestive actions are performed by the gastric juice? What ones can it not perform?

5. Draw a diagram of the right side of the heart showing the vessels and valves, and give their names.

V. ARITHMETIC.

1. Reduce $\frac{4372}{89064}$ to a decimal.

2. Simplify $\frac{\frac{3}{8}}{\frac{5}{6}} \div \frac{\frac{1}{3}}{5} - \frac{4}{15}$.

3. If 2 men working 4 hours per day do a piece of work in 10 days, how many men working 10 hours per day will do the same work in 8 days?

4. A commenced business with a capital of $1,000. At the end of one year it was $1,200. What was his gain per cent?

5. What is the present worth and discount of a note of $600, due 2 years and 3 months from date at 5 per cent?

6. Find the simple, the annual, and the compound interest on a note of $2,000 for 3 years, 2 months, and 24 days at 6 per cent.

7. Extract the square root of .2400635.

VI. ALGEBRA.

1. Add and multiply the following quantities: $3ay^{\frac{1}{2}}$, $4ay^2$, $-3ay^2$, $-5by^{\frac{1}{2}}$, $+5ay^{\frac{1}{2}}$.

2. Find the factors of $a^3 - b^3$ and $a^3 + b^3$.

3. $3ax - 5bx + 10x = 8$. Solve for x.

4. $\begin{cases} 5x + 10y = 11. \\ 2x - 7y = 4. \end{cases}$ Solve for x and y.

5. $(3a^2 x^{\frac{1}{3}} y^0 m^{-3} b^{-\frac{1}{4}})^5$.

6. Multiply $\sqrt{x}$, $-\sqrt{-x}$, $-\sqrt{x}$, $\sqrt{-x}$, and $-\sqrt{-x}$.

7. $\sqrt{5-x} - 3\sqrt{x} = 5$. Solve for x.

PRIZE RECORD.

SMYTH PRIZES.

GIVEN BY HON. FREDERICK SMYTH, OF MANCHESTER, N. H.

ESSAY WRITING.

1881.	1st. George H. Whitcher.	2d. Henry L. Barnard.
1882.	1st. Edward P. Dewey.	2d. Harry L. Boutwell.
1883.	1st. Charles W. Woodward.	2d. Elmer D. Kelley.
1884.	1st. Herbert H. Kimball.	2d. Ernest S. Comings.
1885.	1st. Albert H. Wood.	2d. George P. Wood.
1886.	1st. Arthur W. Hardy.	2d. George A. Sanborn.
1887.	1st. Hiram N. Savage.	2d. Arthur W. Hardy.
1888.	1st. John W. Smith.	2d. Linwood C. Gillis.
1889.	Not awarded.	
1890.	1st. Edward P. Stone.	2d. Joseph P. Preston.

ORATORY.

1881.	1st. Victor H. Stickney.	2d. George J. Boardman.
1882.	1st. Adams C. French.	2d. Frank L. Bigelow.
		3d. Edwin P. Dewey.
1883.	1st. Frank L. Bigelow.	2d. Charles M. Woodward.
		3d. Adams C. French.
1884.	1st. George E. Adams.	2d. Ernest S. Comings. Moses B. Mann.
	3d. Ruel S. Alden.	
1885.	1st. Paul C. Brooks.	2d. George E. Adams.
		3d. Ruel S. Alden.

1886. 1st. Edward H. Wason. 2d. James E. Harvey.
3d. Arthur W. Hardy.
1887. 1st. Bion L. Waldron. 2d. Arthur W. Hardy.
3d. Melvin B. Carr.
1888. 1st. Melvin B. Carr. 2d. John W. Smith.
3d. George J. Sargent.
1889. Not awarded.
1890. 1st. Joseph F. Preston. 2d. Edward P. Stone.
3d. Ernest G. Cole.

READING.

1881. 1st. Charles M. Woodward. 2d. Frank L. Bigelow.
1882. 1st. Herbert H. Kimball. 2d. William S. Adams.
1883. 1st. Walter E. Angier. 2d. George W. Mullins.
1884. 1st. James E. Harvey. 2d. Madison T. Thurber.
1885. 1st. Galen D. Hull. 2d. Hiram N. Savage.
1886. 1st. Fred H. Colby. 2d. Arthur W. Stone.
1887. 1st. Fred H. Colby. 2d. Fred Washburn.
1888. 1st. William E. Kelleher. 2d. Joseph F. Preston.
1889. Not awarded.
1890. 1st. Charles P. Brown. 2d. { Wilton E. Britton. Charles E. Hewitt.

JESUP PRIZES.

GIVEN BY PROFESSOR JESUP FOR BEST HERBARIUMS.

1879. 1st. Edward A. Mack. 2d. Artemas T. Burleigh.
1880. 1st. Harland A. Nichols. 2d. { Edwin P. Dewey. George A. Loveland.
1881. 1st. Adams C. French. 2d. Lewis G. Flagg.
1882. 1st. { Ernest S. Comings. James B. Wallace. 2d. { Herbert N. Kimball. George M. Moore.
1883. 1st. Andrew W. Brill. 2d. Walter E. Angier.
1884. 1st. James E. Harvey. 2d. George P. Wood.
1885. 1st. Albert A. Taft. 2d. Clinton H. Barrett.
1886. 1st. Edwin C. Gerrish. 2d. { William N. Hazen. George E. Porter.
1887. 1st. Fred Washburn. 2d. { John L. Norris. David E. Stone.
1888. 1st. John Y. Jewett. 2d. Elihu Q. Sanborn.
1889. 1st. Russell M. Everett. 2d. Henry A. Symonds.
1890. 1st. for Class of '92, Fred D. Fuller.
1st. for Class of '93, Charles E. Hewitt.

ALUMNI PRIZES.

ESSAY WRITING.

1883.	1st. Elmore F. Arnold.	2d. Charles M. Woodward.
1884.	1st. Ernest S. Comings.	2d. Herbert H. Kimball.
1885.	1st. George E. Adams.	2d. Albert H. Wood.
1886.	George P. Wood.	
1887.	Arthur W. Hardy.	

BAILEY CHEMICAL PRIZE.

Given by Dr. C. H. Bailey, of Gardner, Mass., and E. A. Bailey, B. S., of Winchendon, Mass.

1888. George E. Porter.
1890. John Y. Jewett.

CATALOGUE OF GRADUATES.

NOTE. — The arrangement is: (a) Name in full. (b) Degrees taken. (c) Residence at time of entering college. (d) Occupation, etc. (e) Present residence.

1871.

William Preston Ballard, B. S., Concord. Farmer. *Concord.*

Lewis Perkins, B. S., Hampton. Civil Engineer. *North Adams, Mass.*

Charles Henry Sanders, B. S., Penacook. Architect and Merchant. *Penacook.*

3 —

1872.

Edwin Bartlett, B. S., Bath. Farmer. County Treasurer, 1883. *Kinsley, Edwards Co., Kan.*

Frank Alexander White, B. S., Bow. Farmer. *Concord.*

2 —

1873.

Frederick Erasmus Eldredge, B. S., Kensington. Teacher and Real Estate Agent. *New Tacoma, Wash.*

James Fred Smith, B. S., A. M. (1885), Fitzwilliam. Instructor in Iowa College. *Grinnell, Ia.*

Charles Henry Tucker, B. S., Plaistow. Carriage Wood-worker. *Amesbury, Mass.*

3 —

1874.

Millard Fillmore Hardy, B. S., Nelson. Graduated Theo. Inst., Conn., 1878. Clergyman. *West Boylston, Mass.*

Henry Abbott Sawyer, B. S., North Weare. Business. *Far Rockaway, N. Y.*

2 —

1875.

Walter Herman Aldrich, B. S., M. D. (Univ. N. Y. City, 1880), Troy. Physician. *Marlborough.*

Frank Pierce Curtis, B. S., Stoddard. Manager of Store.
Greenfield, Mass.

Frank Veranus Emerson, B. S., Lebanon. Manufacturer.
East Lebanon.

Charles Webster Hardy, B. S., M. D. (Mo. Med. Coll., 1881), Marlborough. Physician. *Waterville, Kan.*

Harvey Jewell, B. S., Winchester. Farmer. *Winchester.*

Charles Ormille Leavitt, * B. S., Lebanon. Farmer. Died, 1877.

John Lomey McGregor, B. S., D. D. S. (Phila. Dental Coll., 1877), M. D. (1883), Whitefield. Physician. *Whitefield.*

Eliel Peck, B. S., Lebanon. Farmer and Printer, 1875–80. Merchant. *Kimball, Minn.*

Ira William Ramsey, B. S., Walpole. Farmer. *Walpole.*

Orlando Leslie Seward, B. S., Keene. Architect. *Keene.*

Emery Mason Willard, B. S., Harrisville. Drug Clerk.
15 *Union St., Boston, Mass.*

11 — * 1

1876.

Herbert Cyril Aldrich, B. S., Troy. Insurance Agent. *Keene.*

Edmund Lawson Brigham, B. S., Jaffrey. Manufacturer.
Clinton, Mass.

Joseph Warren Butterfield, B. S., Westmoreland. Farmer.
North Montpelier, Vt.

Arthur Frank Chamberlain, B. S., Westmoreland. Commercial Traveler. *Jackson, Mich.*

Anson Ballard Cross, B. S., Holyoke, Mass. Paper Maker.
Readsborough, Vt.

Warren Webster Kimball, B. S., Troy. Merchant. *Troy.*

Daniel Deeth Parker, B. S., Fitzwilliam. Manufacturer.
Gardner, Mass.

7 —

1877.

Rollin Kirk Adair, B. S., Ind. Ter. Farmer.
Locust Grove, Cherokee Nation, Ind. Ter.

Homer Brooks, B. S., M. D. (N. Y. Hom. Med. Coll., 1881), Franconia. Physician. *Haverhill, Mass.*

John Washington Carson, B. S., Mont Vernon. Farmer.
Mont Vernon.

Charles Otto Chubert, * B. S., Troy.

Charles Albert Edwards, * B. S., LL. B.(State Uni., Iowa, 1880), Keene. Lawyer. Died, 1886.

William Francis Flint, B. S., Richmond. Farmer. *Winchester.*
Clinton Camillus Hall, B. S., Westmoreland. Farmer. *East Westmoreland.*
John Goodrich Henry, B. S., M. D. (1880), Chesterfield. Physician. *Winchendon, Mass.*
Charles Pitkin Hollister, B. S., North Montpelier, Vt. Farmer. *North Montpelier, Vt.*
George Mirick Holman, B. S., M. D., Fitchburg, Mass. Instructor in Bryant & Stratton's Commercial College. *Boston, Mass.*
Charles Appleton Hubbard, B. S., Troy. Clerk. *Malden, Mass.*
Charles Augustus Wheeler, B. S., East Calais, Vt. Farmer. *Bracken, Comal Co., Tex.*
Everard Whittemore, B. S., Fitzwilliam. Merchant. *Marlborough, Mass.*

13 — * 2

1878.

Ezra Eastman Adams, B. S., Manchester. Clerk. *Philadelphia, Penn.*
Elmer Kilburn, * B. S., C. E., Marlow. Civil Engineer. Died, 1881.
Charles Edward Record, B. S., Fitchburg, Mass. Farmer. *Fitchburg, Mass.*

3 — * 1

1879.

Charles Hardy Bailey, B. S., M. D. (1881). Physician. *Gardner, Mass.*
Richard Clinton Chapin, B. S., Chicopee, Mass. Agent for Nonotuck Paper Co. *Holyoke, Mass.*
Lucius M. Cragin, B. S., Lempster. Farmer. *Springfield, Vt.*
Nathaniel Cutter Holmes, * B. S., Amherst. Lawyer. Died, 1887.
Fred Charles Parker, B. S., Lempster. Merchant. *Acworth.*
George Henry Wilkins, B. S., M. D. (N. Y. Hom. Med. Coll., 1883), Amherst. Physician. *Palmer, Mass.*

6 — * 1

1880.

Charles Harvey Hood, B. S., Derry. Farmer. *Derry.*

1 —

1881.

Edwin Thomas Aldrich, B. S., Troy. Insurance Clerk. *Keene.*
Henry Lyman Barnard, B. S., Troy. Clerk. *Troy.*
George Jordan Boardman, * B. S., Lawrence, Mass. Medical Student. Died, 1886.

Edwin Franklin Bristol, B. S., Harwinton, Conn. Mechanic. *Ascutneyville, Vt.*

Artemas Terald Burleigh, B. S., Franklin. Merchant. *Tilton.*

Frank Dana Ely, B. S., Cavendish, Vt. Prison Official. *Windsor, Vt.*

Sanford Eugene Emery, B. S., LL. D. (Albany Law School, 1886), Proctorsville, Vt. Lawyer. *Proctorsville, Vt.*

Charles Herbert Hazen, B. S., Hartford, Vt. Farmer. *Hartford, Vt.*

Frank Pattee Marston, B. S., Hartford, Vt. Merchant. *Olcott Falls, Vt.*

William Augustus Megrath, B. S., M. D. (1885), Cavendish, Vt. Physician. *Loudon.*

Fred Townsend Stanton, B. S., Strafford. Farmer. *Strafford Corner.*

Victor Hugo Stickney, B. S., M. D. (1883), Tyson, Vt. Physician. *Dickinson, Dak.*

Samuel Austin Wallace. B. S., Ph. G. (Mass. School of Pharmacy, 1886), West Hartford, Vt. Druggist. *Crookstone, Minn.*

George Herbert Whitcher, B. S., Strafford. Professor of Agriculture, and Director of Experiment Station. *Hanover.*

14 — 1

1882.

Harvey Lincoln Boutwell, B. S., LL. B. (Boston Univ., 1886), Hopkinton. Lawyer. 209 *Washington St., Boston, Mass.*

Dana Justin Bugbee, B. S., North Pomfret, Vt. Business. *Boston, Mass.*

Robert Fletcher Burleigh, B. S., D. V. S. (Am. Veterinary College, 1885), M. D. (1887), Franklin. Instructor in Veterinary Science, 1885–88. Professor of Physiology and Veterinary Science, Kansas State Agricultural College, 1888–89. Physician. *Rochester.*

La Forrest John Carpenter, B. S., Surry.

Edwin Preston Dewey, B. S., Hanover. Assistant Superintendent and Principal of the Schools of the Marcella Street Home. *Boston, Mass.*

George Andrew Loveland, B. S., LL. B. (Univ. of N. Y., 1886), Norwich, Vt. U. S. Signal Service. *Crete, Neb.*

John Wright Mason, B. S., Hanover. Business. *Des Moines, Ia.*

Harlan Addison Nichols, B. S., Derry. Business. *Colorado, Tex.*

Frank Elmer Thompson, B. S., Stark. Lumberman. *Ridgeway, Penn.*

9 —

1883.

Elmore Ferdinand Arnold, B. S., M. D. (Univ. City N. Y., 1885), Londonderry, Vt. Physician. *New York, N. Y.*

Frank Landor Bigelow, B. S., Proctorsville, Vt. Instructor in Mathematics and Sciences, Goddard Seminary, Barre, Vt., 1883–86. Business. *Rutland, Vt.*

Frederick Stocks Birtwhistle, B. S., Troy. With Automatic Fire Alarm and Extinguisher Co. 283 *Franklin St., Boston, Mass.*

Noice D. Bristol, B. S., Harwinton, Conn. Clergyman. *Millbury, Mass.*

Fred Plummer Comings, B. S., Lee. Teacher. *Lee.*

Frank Harry Follansbee, B. S., Canaan. Farmer. *Canaan.*

Adams Clark French, B. S., Franklin Falls. Theological Student. *Chicago, Ill.*

James Edgar Gay, B. S., Tunbridge, Vt. Manufacturer. *Cavendish, Vt.*

Elmer Daniel Kelley, B. S., Franklin Falls. Farmer. *Franklin Falls.*

Alvah Benjamin Morgan, B. S., Canaan. Drug Clerk. *Lebanon.*

William Lincoln Whittier, B. S., Deerfield. Farmer. *Deerfield.*

Charles Minot Woodward, B. S., Hanover. Instructor in Agriculture, 1883–84. Teacher. *Kirk, Tex.*

12 —

1884.

Ernest Smith Comings, * B. S., Lee. U. S. Signal Service. Died, 1886.

Fred Carlos Davis, B. S., South Reading, Vt. Land Surveyor and Insurance Agent. *Felchville, Vt.*

Sylvester Miller Foster, B. S., Riverhead, L. I. Insurance Agent. *Riverhead, L. I.*

Herbert Harvey Kimball, B. S., Hopkinton. U. S. Signal Service. *Washington, D. C.*

Moses Bisbee Mann, B. S., Benton. Custom House Official. *Boston, Mass.*

George Milton Moore, B. S., Plymouth, Vt. Merchant. *Tyson, Vt.*

Ziba Amherst Norris, B. S., Lyme. Clerk. *Wakefield, Mass.*

Edwin Chapin Thompson, B. S., Lee. U. S. Signal Service. *Fort Supply, Ind. Ter.*

8 — * 1

1885.

George Ellsworth Adams, B. S., Weston, Vt. U. S. Signal Service. *Fort Duchesne, Utah.*

Ruel Seabury Alden, B. S., Lyme. Superintendent of Brightside Farm. *Holyoke, Mass.*

Walter Eugene Angier, B. S., C. E. (1887), West Swanzey. Civil Engineer. *Memphis, Tenn.*

Edward Alonzo Bailey, B. S., West Swanzey. Business. *Winchendon, Mass.*

Phillips Greenleaf Bickford, B. S., Lyme. Teacher. *Farmington, Wash.*

Andrew Walter Brill, B. S., Riverhead, L. I. In Kansas Seed House. *Lawrence, Kan.*

Paul Cuff Brooks, B. S., Boston, Mass. Clerk. 25 *Westminster St., Boston, Mass.*

Frank Jay Emerson, B. S., Epping. Clerk. *Epping.*

Allen Hazen, B. S., Hartford, Vt. Chemist of State Board of Health. *Lawrence, Mass.*

George Mayo Mullins, B. S., Londonderry. Farmer. *North Londonderry.*

Albert Henry Wood, B. S., Lebanon. Associate Professor of Agriculture. *Hanover.*

11 —

1886.

Frank Albert Davis, B. S., South Lee. U. S. Signal Service. *Boston, Mass.*

James Ellsworth Harvey, B. S., Surry. Photographer. *Somerville, Mass.*

Belezar Stoianoff Ruevsky, B. S., Sistova, Bulgaria. *Sistova, Bulgaria.*

Madison Templeton Thurber, B. S., M. D. (1890), Webster. Physician. *Grafton.*

Edward Hills Wason, B. S., New Boston. Lawyer. *Nashua.*

George Pillsbury Wood, B. S., Lebanon. Civil Engineer. *Roanoke, Va.*

6 —

1887.

William Sprague Currier, B. S., Norwich, Vt. United States Signal Service. *Cleveland, O.*

Arthur Woodbury Hardy, B. S., C. E. (1889), Hopkinton. Civil Engineer.

George Albert Sanborn, B. S., Rochester. Teacher. *Rochester.*

Hiram Newton Savage, B. S., White River Junction, Vt. Civil Engineer.

Bion Leland Waldron, B. S., Strafford. U. S. Signal Service. *Boston, Mass.*

5 —

1888.

Melvin Burnside Carr, B. S., North Haverhill. Farmer. *North Haverhill.*
Herbert Grant Davis, B. S., South Lee. Farmer. *South Lee.*
Edwin Chandler Gerrish, B. S., Webster. Farmer. *Webster.*
William Nelson Hazen, B. S., C. E. (1890), Hartford, Vt. Civil Engineer.
Edward David O'Gara, B. S., Hanover. Farmer. *Hanover.*
George Elmer Porter, B. S., Hartford, Vt. Medical Student. *Hartford, Vt.*
George Jonathan Sargent, B. S., Canterbury. Civil Engineer. *Canterbury.*
John Warren Smith, B. S., Grafton. U. S. Signal Service. *Boston, Mass.*
George Elwin Walker, B. S., Littleton. Farmer. *Littleton.*

9 —

1889.

Fred Harvey Colby, B. S., Hopkinton. Civil Engineer.
Linwood Carroll Gillis, B. S., Manchester. Journalist. *Manchester.*
Louis Jerome Hutchinson, B. S., Norwich, Vt. Electrician. *Boston, Mass.*
John Lawrence Norris, B. S., Lyme. Farmer. *Lyme.*
Charles Walter Earl Scott, B. S., Winchester. Clerk. *Winchester.*
David Elmer Stone, B. S., Hartford, Vt. Farmer. *Hanover.*
Fred Washburn, B. S., West Springfield. Business. *West Springfield.*

7 —

1890.

John Young Jewett, B. S., Gilford. Farmer. *Gilford.*
Joseph Franklin Preston, B. S. Business. *Hanover.*
Elihu Quimby Sanborn, B. S., Webster.
Clarence Ira Slack, B. S., Norwich, Vt. Farmer. *Norwich, Vt.*

4 —

CATALOGUE OF NON-GRADUATES.

NOTE.—The time of connection with the college varies from one term to three years. Present residence not being known, the former residence is given. Dates show the years of connection. Corrections solicited.

Henry Clinton Adams, 1875. *Manchester.*
William Stone Adams, 1881–83. Farmer. *Camp Clarke, Neb.*
Jerome Barker, 1869. *Dublin.*
Clinton Hoyt Barrett, 1884–86. Dentist. *Winchester.*
Arthur Lewis Bartlett, 1871. *Hill.*
Charles Freeman Barus, 1878–79. *Richmond.*
Charles Joseph Batchelder, 1872–73. Mason. *Hampton.*
George Herbert Batchelder, 1872. Farmer. *Hampton.*
Fred George Bliss, 1882. Farmer. *Lyme.*
Herbert Everett Brooks, 1872. *Rindge.*
William Wallace Brown, 1868. Lumberman. *Campton Village.*
Ernest Foster Bugbee, 1885. *Hartford, Vt.*
Louis Joseph Campbell, 1885–86. Student. *Hanover.*
Albert Carney, 1868. Hotel-keeper. *Choctaw Nation, Ind. Ter.*
Fred Goodwin Chase, B. S. (1890), 1885–86. Business. *New York, N. Y.*
Edward Leighton Child, 1886–87. Farmer. *Cornish Flat.*
George Franklin Clapp, 1876–77. Mechanic. *Worcester, Mass.*
John Dean Colony, 1872–73. *Keene.*
Richard Leeds Conner, 1872–73. Clerk. *St. Louis, Mo.*
Edgar Orin Crossman, 1881–82. Physician. *Burlington, Vt.*
James William Cuthbert, 1881–83. *Gilsum.*
Don Himan Darling, 1884. Railroad Employé. *Hanover.*
Gilman Webster Davis, 1872. *Stoddard.* Dead.
Homer Augustus Davis, 1875. Farmer. *Fitzwilliam.*
Bertran Myron Dimick, 1884. Painter.
Joseph Edwin Everett, 1868. Printer. *Manchester.*
Lewis Gardner Flagg, 1880–81. Designer. *Boston, Mass.*
Eben Caleb Ford, 1880–81. Clerk. *Ludlow, Vt.*
Albert Carter Fogg, 1885–86. *Quechee, Vt.*

Jerry Currier Fogg, 1882–84. Farmer. *Deerfield.*
Elmer Gilman Fosgate, M. D., 1885–86. *Winchester.*
William Barrett Fosgate, 1885–86. *Winchester.*
Sumner Fremont Gay, 1880. Farmer. *North Charlestown.*
Alton Albion Gile, 1881–83. Drug Clerk. *Newport.*
Frank William Gould, 1883–84. Farmer. *Hanover.*
George Hall, 1879. Railroad Clerk. *Boston, Mass.*
Jesse Fisk Hall, 1883–85. Civil Engineer. *Antigo, Wis.*
Edward Dana Hardy, 1886–89. Civil Engineer. *Hebron.*
Frank Elmer Hazen, 1885–86. *Hartford, Vt.*
Fred Azro Hazen, 1878–79. *Hartford, Vt.* Died, 1879.
Chauncy William Healey, 1868. Mechanic. *Swanzey.*
Horace Milton Hills, 1882. Farmer. *Plaistow.*
Andrew Johnson Hoisington, 1885–86. *Hartland, Vt.*
Harvey Monroe Holt, 1871. *Nelson.*
Milton Hood Hoyt, 1885–86. *Brooklyn, N. Y.*
Galen Downer Hull, B. L. (1890), 1884–86. Teacher. *Hanover.*
Horace Elijah Hurlbutt, 1883–84. Farmer. *Hanover.*
Charles Everett Huse, 1882. Merchant. *Enfield.*
Fred Burton Huse, 1875–76. Farmer. *Hartford.*
Emri Clark Hutchinson, 1868. Farmer. *Milford.*
William Lord Jenkins, 1874–75. *Fitzwilliam.* Dead.
Irving Jackson Johnson, 1885–87. Farmer. *Norwich, Vt.*
John Huntoon Judkins, 1884–86. *Charlestown.*
George Clinton Junkins, 1885–87. Farmer. *Hanover Center.*
Alfred Edward Jewett, 1874. *Rindge.*
Irwin Jewett, 1872. *Dover.*
Charles Amory Kibling, 1884–85. Business. *Hanover.*
Charles Henry Knight, 1876–77. Weaver. *Hinsdale.*
Herbert M. Lang, 1869. Carpenter and Builder. *Worcester, Mass.*
Arthur Herbert Leighton, 1885–86. Farmer. *Saxton's River, Vt.*
Charles Albert Loveland, 1879–81. Farmer. *East Saginaw, Mich.*
Joseph Henry Loveland, 1879–81. Farmer. *Norwich, Vt.*
William Alfred May, 1875. Farmer. *Potsdam, N. Y.*
Edward Ayr Mack, 1878–80. *Franklin.* Died, 1880.
Levi Elmer MacPherson, 1883–84. Farmer. *Lowell, Mass.*
Charles David Mandeville, 1876–77. *Newark, N. J.*
Lester Everett Mason, 1872. Merchant. *Keene.*
Robert William Mason, 1884–86. Farmer. *Hanover.*
Alfred Elmer Mathews, 1881–83. Farmer. *Norwich, Vt.*
William Ware Miller, 1881–82. Farmer. *Pomfret, Vt.*
James Alexander Moore, 1882. Tailor. *Littleton.*
Charles Edwin Mudge, 1870–72. *Kensington.*

George Thomas Murdough, 1886. *South Acworth.*
Chester Osborne, 1883–84. *Colorado Springs, Col.*
Granville Hamblett Parks, 1881–82. *Woburn, Mass.*
Angus Oster Patton, M. D., 1880–82. Physician. *Montreal, P. Q.*
Walter Hiram Perry, 1875–76. *Swanzey.*
Edwin Mahlon Pike, 1889–90. Farmer. *Hanover.*
Louis Pollens, Jr., 1886–87. Student. *Hanover.*
William Forbes Read, 1868. Mechanic. *East Swanzey.*
William Curtis Reed, 1871. *Westmoreland.*
Fred Herbert Richardson, 1886–87. Farmer. *Cornish Flat.*
William Patten Robinson, 1886–88. *Epping.*
Henry Edward Rood, 1886–88. Journalist. *New York City.*
Isaac Fitz Sawyer, 1870–72. Lawyer. *Cambridge, Mass.*
Rufus Harvey Simonds, 1885–86. *Hartford, Vt.*
Victor Ira Spear, B. S. (1874), 1870. Farmer. *Braintree, Vt.*
Eugene Wheatley Spicer, 1875. *Randolph, Vt.*
Walter Henry Spofford, 1883–84. Wheelwright and Farmer. *South Groveland, Mass.*
Frank Dennis Stanley, B. S. (1879), 1875. Surveyor. *Frankfort, Mich.*
George Ephraim Stark, 1886. Mechanic. *Lyme.*
Arthur William Stone, 1885–86. Student. *Hartford, Vt.*
Charles Perpetual Swain, 1886–87. *Olcott Falls, Vt.*
Albert Atherton Taft, 1884–85. Farmer. *Winchester.*
Charles Henry Tewksbury, 1885–86. *Hartford, Vt.*
Charles Moses Tewksbury, 1885–87. *White River Junction, Vt.*
Granville Burnham Thompson, 1886–88. *Lee.*
Louis Buchanan Thurston, 1878–79. *Franklin.*
George Foster Tracey, 1885–86. *Hartford, Vt.*
James Burns Wallace, A. B. (1887), 1881–82. Bank Clerk. *New York City.*
John Reuben Wallace, 1878–79. Farmer. *Sharon, Vt.*
Charles Lincoln Wilkins, 1879–81. Merchant. *Amherst.*
William Grafton Wentworth, 1874. *Haydenville, Mass.*
Irwin Orley Wright, 1872–74. Telegraph Operator. *Boston, Mass.*
William Burns Wright, 1880–81. Book-keeper. *Lebanon.*
William Clement Whipple, 1881–82. Farmer. *Pomfret, Vt.*
Charles Albert Wilcomb, 1868. Farmer. *Chester.*
James Harris Wolfe, 1868. *Boston, Mass.*

SUMMARY.

	Living.	Dead.	Total.
Graduates (1871–90, inclusive)	129	7	136
Non-graduates (same classes)	103	4	107
Students in attendance since last report . .	60		
Total connected with college, deducting those reckoned twice			300

OCCUPATIONS.

	Graduates.	Non-Graduates.	Total
Clergymen	2		2
Lawyers	3	1	4
Physicians	12	4	16
Professors of agriculture	2		2
Others in agricultural pursuits . . .	31	27	58
Other teachers	8	1	9
Civil and mechanical engineers . . .	8	3	11
Architects	2		2
Chemist	1		1
Electrician	1		1
Journalists	1	1	2
Manufacturers and mechanics . . .	7	10	17
Students of law, theology, and medicine .	3		3
In United States signal service . . .	8		8
In business pursuits	36	14	50
Unclassified	2	8	10
Unknown	2	35	37

AGRICULTURAL COLLEGE FARM

HANOVER, N.H.

TOTAL AREA 243 ACRES.

FORESTRY.

INTRODUCTORY.

More than five years have now passed since the report of the first Forestry Commission of the State was published, but the questions there raised have not yet been settled and are of too great importance to be lost sight of. It was then stated that a little more than half of New Hampshire is still in forest of some kind and a large portion likely to be so permanently. It was estimated that the value of the wood and timber cut yearly amounted to the value of five millions of dollars, and that, too, in its unmanufactured state, while this is only one of the numerous industries connected with and dependent upon our woodlands and forests.

The great variety of surface and soil and location included in the State affords great opportunity for a large variety of trees and shrubs. And as the land rises gradually from the seashore, following the course of our river beds and lakes to the mountains, each additional elevation has its characteristic and changing vegetation, until nearly every species found in Northern New England is at home within our borders.

As the discussion of the forestry question goes on, it has been thought desirable to republish from the report above mentioned a descriptive list of the trees and shrubs of the State so that we may be reminded of what we have to preserve. This list is one of permanent value for study and reference because prepared as the result of a personal exploration of all parts of the State by an experienced woodman. Over one hundred and eighty names are included of woody plants, more than one half of which are either trees or large shrubs, and of these latter over sixty may be called timber trees. The names of each of these, with some general knowledge of their characteristics and uses and the part of the State where found, should be taught in the common schools as a part of the education of every citizen.

The scientific names given below are from Gray's Manual of Botany, sixth edition (1890).

HENRY G. JESUP.

THE TREES AND SHRUBS COMPOSING THE NEW HAMPSHIRE FORESTS.

THEIR DISTRIBUTION, RELATIVE ABUNDANCE, AND UTILITY.

BY WM. F. FLINT, B. S., WINCHESTER, N. H.

Originally a dense forest covered our State. There were no "parks" as in the Rocky Mountain region, or "oak openings" and grassy plains as in the valley of the Mississippi; but with the exception of a few sedgy swamps, the work of the beavers, and some favorable spots near the streams where the Indians had established their rude corn fields, together with those parts of the White Mountains whose elevation above the sea gives them a climate too severe to allow the growth of arborescent vegetation, there were no other breaks in this wilderness, — a body of forest, which, when the white man's ax first began to destroy it, was equal in the variety and quality of its timber to any on the northern part of the Atlantic slope.

Two hundred years have so far changed this, that, instead of possessing a superabundance of the finest timber, the present generation must consider the best methods of conserving what now remains, and can never hope to see in the present young woodlands timber equal in quality to that of the primitive forest. The old growth remains only in parts of the White Mountain district and a few localaties elsewhere, which are not easily accessible.

That the evil is not far greater is due, probably, to the fact that the climate of our State is more favorable for the return of a new forest after the old one has been destroyed than that of most

countries, and because the railways have rendered it easy to use mineral coal for fuel in the large towns and cities.

The chief of our recent geological survey, Prof. C. H. Hitchcock, in order to get information which might help to solve certain problems in geological science, caused researches to be made concerning the way in which the animals and plants of the State were distributed. As a result, it was found that both the fauna and flora could be separated into two well-marked divisions, which, in accordance with the usage of others who had made similar studies, it was thought best to term Canadian and Alleghanian. The dividing line between the two, however, was found to be much more sharply defined in case of the animals than of the plants, owing perhaps to the fact that the animals are able at will to keep within those limits which they find to be most congenial, while the plants spring up wherever the seed happens to fall, and must adapt themselves to the particular locality and conditions, or perish altogether. It is easy to adopt this classification for the distribution of our arborescent vegetation; and the primal cause which places the different species in one division or the other is found to be the altitudes above the sea level at which they appear or disappear.

Certain of our trees, which may be regarded as typical of the Alleghanian flora as it is shown in our State, are found at their northern limit growing at an altitude which is not far from six hundred feet above the ocean; and the six hundred feet contour may be taken, therefore, all things considered, as best defining the northern limit of this part of our flora. We find, also, on all those elevations in the southern part of the State that rise higher than one thousand feet, that the trees are mostly those species which compose the forests of the White Mountain district and northward, and therefore to be considered of the Canadian type; and the Alleghanian species so rarely reach that altitude that their presence in such localities may be considered exceptional.

As examples of this method of distribution, we may name the white oak and the pitch and red pines as characteristic Alleghanian trees, because at the six hundred feet contour they find their northern limit in the Connecticut valley on the west, and at

about the same elevation south of the White Mountains on the east side of the State, while near the Massachusetts line they are very rarely seen growing in localities more than one thousand feet above the sea.

On the other hand, that strictly Canadian tree, the arbor-vitæ, is never found native at altitudes which are below six hundred feet above the sea, except at one place in the Connecticut valley where its southern limit is at the rapids which are not far north of the White river; also the most of the spruce which grows south of the White Mountains along the Connecticut-Merrimack watershed, is found at altitudes not far from one thousand feet above the sea. It is also not uncommon to find, throughout the area which is mostly occupied by the southern types, tracts where the flora is largely Canadian, which tends to show that the latter is much the older, and has been slowly giving way to the encroachments of those trees which flourish best farther south.

At first thought it might seem that only those woody plants which grow tall enough to be of some value as fuel need be included in a description of our forest trees; but as it is difficult always to draw the line between a small tree or a large shrub, and as shrubs are always present in our fields and forests, and so many of them have a direct economic value because of their fruit, and as they must all be dealt with in any scheme of forest culture, either as weeds to be removed to make way for a better growth, or as nurses for the seedlings of the best kinds of timber trees, it is thought best to include them, noting those that are rarest, or of little importance, very briefly. In the following catalogue the species are designated by their scientific and some of their common names, together with brief descriptions and notes of some of their uses.

The authority followed is Gray's Manual of Botany, sixth edition (1890).

Berberis vulgaris, L.

Common Barberry; naturalized from Europe; occasionally within the oldest settled portions of the State. A shrub ten to fifteen feet high, with spiny branches. An excellent hedge plant. The bark and wood yield a yellow dye, and the handsome, acid, scarlet fruit is good for preserving.

Xanthoxylum Americanum, Mill.

Northern Prickly Ash. Rare. At a locality near Nashua it seems to be indigenous, and it has escaped from cultivation to a few places elsewhere. A prickly, low shrub. The whole plant pungent and aromatic. Of use in medicine.

Vitis Labrusca, L.

Northern Fox Grape. The species from which most of the cultivated varieties are derived. Common to the alluvial soils and rocky hillsides of the lower Connecticut valley and eastern New Hampshire. The fruit of the wild vine is often of good quality.

Vitis æstivalis, Michx.

Summer Grape. This has the same range as the preceding, and is distinguished from it by the leaves being slightly downy instead of white-woolly beneath, and the fruit about half the size, and usually less palatable. Varieties are sometimes found which are so much better than the type form as to show that it would soon improve if cultivated. In the Southwestern States this is the commonest and best-esteemed species.

Vitis riparia, Michx.

Frost Grape, Winter Grape. The most northern species, ranging as far as the foot of Fifteen-mile falls, on the Connecticut. Leaves heart-shaped, slightly three-parted, and smooth, except a few hairs along the veins of the under side. Fruit small, abundant, and of no value until after frost, when it may be useful in localities where better grapes are not to be had. All our species of grape are good types of the Alleghanian flora, rarely being found native above six hundred feet from the sea.

Ampelopsis quinquefolia, Michx.

Woodbine, Virginia Creeper. Well known in cultivation. A handsome, tall, climbing vine, the shining leaflets in fives, and turning bright scarlet in autumn. Fruit the size of peas, bright blue. Common everywhere from the base of the White Mountains southward.

Rhamnus cathartica, L.

Common Buckthorn. A small tree, with hard, reddish, or orange-colored wood, and small, nauseous, black berries. It is used for a hedge plant, for which purpose it was introduced from Europe, and it has become well naturalized in the southwestern part of the State.

Rhamnus alnifolia, L'Her.

A slender shrub, found in cold swamps. Rare.

Ceanothus Americanus, L.

New Jersey Tea, Liberty Tea, Red-root. A shrub one or two feet high, forming rounded clumps. Flowers white. Dry, sterile soils; Eastern New Hampshire and near the Connecticut north to Olcott Falls. The leaves have sometimes been used as a substitute for tea.

Celastrus scandens, L.

Wax-work, Climbing Bitter-sweet. A twining shrub, common near the Connecticut and Merrimack rivers. The orange-colored pods open and display the scarlet fruit, and these remain all winter. Often cultivated for ornament, and reputed to be medicinal.

Staphylea trifolia, L.

A handsome shrub, ten feet high. Leaves in threes, and the bark striated with green. Because of the inflated pods it is called Bladder-nut. Only rarely to be met with, chiefly in the lower Connecticut valley.

Tilia Americana, L.

American Linden, or better known as Basswood. A large tree, to be met with in all parts of the State, from the sea to altitudes two thousand feet above it. In the southern part of the State it is found most abundantly near the streams, and when found on high lands, prefers a moist, rich soil. It is commonest and best developed in the upper Connecticut valley, where specimens are often met with which are eighty to one hundred feet in height, with a diameter of from two to four feet. Bark very tough and strong, owing to its very coarse fibers, and can therefore be used

for making coarse matting. Wood very soft, light, and elastic; useful for lumber, a good material for carving, and remarkable for the facility with which it can be molded into various curved forms, and therefore much in demand for carriage-work. As bees derive an abundance of the best of honey from its flowers, it is recommended by apiarians, as a profitable investment, to plant it as a source of honey. It is of very rapid growth; its abundant foliage makes it very desirable as a shade tree. It matures in from fifty to one hundred years, but becomes of sufficient size for timber in twenty or thirty. Wood of little value for fuel, but the ashes very rich in potash.

Rhus, Sumach.

Rhus typhina, L. Staghorn Sumach. The largest of the genus which grows in New Hampshire. A shrub ten to twenty feet high, with wide-spreading branches, the tips of which are covered with velvety hairs, which cause them to resemble the young horns of deer. Common everywhere up to two thousand feet altitude. Flourishes best in moist, rocky situations, and sometimes attains a diameter of ten inches. The orange or yellowish green colored wood capable of taking a good polish, and useful for small cabinet and ornamental work.

Rhus glabra, L. Smooth Sumach. Six to ten feet high, with smooth branches and leaves, and very large heads of fruit. Stem rarely more than two inches in diameter. This species is seldom seen on the highlands, but is common to the eastern part of the State, and the lower Connecticut valley.

Rhus copallina, L. Dwarf Sumach. Usually four to six feet high, with the shining leaves winged along the petioles. Ranges with *R. glabra*. The leaves of this and the two preceding species are gathered in Virginia for tanning purposes. Perhaps the same use might be made of our sumachs, unless our season is too short for the best development of the tanning principle.

Rhus venenata, DC. Poison Sumach. Often called Dogwood, name which properly belongs to *Cornus*. Common in the swamps and moist places in the southern part of the State. A handsome species ten to twenty feet high, with dark green, shining leaves, and slender racemes of whitish fruit. Wood in color sim-

ilar to that of the Staghorn Sumach. This species is extremely poisonous to the touch of the majority of people, causing painful swellings and watery blisters on the skin of the parts which come in contact with it, and some are so extremely sensitive to its effects as to be poisoned if they stand within a few feet of it when the air is hot and moist. Others, on the other hand, can handle it, and even chew the leaves, with impunity, feeling no ill effects whatever. The milky juice is said to have properties similar to that of the lacquer tree of Japan, *R. vernicifera.*

Rhus Toxicodendron, L. Poison Ivy, Poison Oak. A creeping and climbing shrub everywhere well known and common. Fruit whitish, and leaves in threes. Poisonous like the preceding, but in a less degree. The climbing variety, the *R. radicans* of some botanists, is not very common here, but is sometimes seen clinging to the trunks of trees and rocks, and becoming ten or fifteen feet high, with a stem an inch or two in diameter, while in the Mississippi valley it reaches the tops of the tallest trees, with a stem four to six inches in diameter.

Acer saccharinum, Wang.

Sugar or Rock Maple, the finest and most useful of the maple genus. In New Hampshire it is most abundant as a highland tree, and is characteristic of the Canadian division of our flora. It is least common in the southeastern part of the State, and when found indigenous to Hillsborough and Rockingham counties it is in moist, rocky places, where the conditions of the soil resemble the slopes of the highlands farther north and west. It is a common tree throughout Cheshire, Sullivan, Grafton, and Coös counties; a source of revenue because of its sugar, and the standard wood for fuel. It yields lumber which is very hard, heavy, susceptible of a fine polish, and is much used in chair-making and cabinet-work, but is only moderately durable when exposed to the weather. Isolated specimens occur which have the peculiar grain known as "bird's-eye maple," so much prized as an ornamental wood. There is a variety known to the farmers as "black sugar maple," which differs somewhat from the ordinary form in botanical characters. When at maturity in the forest, the rock maple attains a height of seventy or eighty feet, with a diameter of from

two to four, but in the open land forms a many-branched, rounded or oblong head, with a short, stout trunk. Foliage brilliant yellow and orange in autumn. This maple is one of the most ornamental and popular of deciduous shade trees, matures in about one hundred years, but grows rapidly enough to be valuable for fuel, timber, and shade in twenty or thirty. Although this tree is entitled to a place in the first rank in economic forestry, it is too much neglected, and there are few attempts to replace the old sugar camps preserved by the first settlers.

Acer rubrum, L.

Red or Scarlet Maple, but almost universally called "White Maple" by the farmers and lumbermen of New Hampshire. A good sized tree, so universally distributed over the State, from the sea to two thousand feet altitude, as to be at once recognized as the most common of our maples. Flourishes in all soils and situations from swamp to rocky hillside. Wood far more durable than that of other maples, lasting a long time unless driven into the ground as posts or stakes. Not as hard as that of the preceding species, but takes a good polish, and is used for the same purposes. "Curled maple," the variety with wavy grain, is derived from this species. It is of rapid growth, has a height of from forty to sixty feet, and, owing to the brilliant colors of the foliage in autumn and the red flowers in spring, is the most notable deciduous tree in our forests.

Acer dasycarpum, Ehrh.

White, Soft, or River Maple. A tree sometimes sixty or seventy feet in height, and four or five feet in diameter, although usually not more than forty or fifty feet in height, with a diameter of twelve or eighteen inches. A graceful tree, with deeply cut leaves, ripening its fruit the earliest of any of the maples. With us it is closely confined to the banks of the larger streams, and therefore forms a small proportion of our forests. It has soft wood, is of very rapid growth, and is the maple so largely used to plant on the prairies west of the Mississippi.

Acer Pennsylvanicum, L.

Striped Maple or Moosewood, and *Acer spicatum*, L., Mountain Maple, are large shrubs or small trees common to our highland woods, the latter especially abundant along the sides of mountain brooks. Both are valuable for ornamental planting, but of too small size to serve for anything else but fuel.

Robinia Pseudacacia, L.

Common Locust. A valuable timber tree with us, naturalized from the South or West. It does best in moist, alluvial soils, but in this latitude it is so subject to the attacks of borers as to greatly injure its wood and make the tree so short-lived that it is not worth while to give it much attention as a forest tree, which is to be regretted, as the timber is hard, elastic, and exceedingly durable. It is with us a middle-sized tree, but in the South becomes sixty or eighty feet high, with a diameter of three feet.

Prunus Americana, Marshall.

In this State called Canada Plum or Pomegranate. A small tree, probably introduced from further westward for the sake of the red or orange-yellow fruit, which is sometimes very sweet and pleasant, but usually so acid as to be best adapted for preserving. It is now well naturalized in most parts of the State, especially in Coös county. This species is probably capable of great improvement as a fruit tree, but as yet has been almost wholly neglected by the experimental fruit-grower.

Prunus Pennsylvanica, L.

Red or Bird Cherry. A small tree, thirty or forty feet high, sometimes a foot in diameter. Everywhere common, but seldom large enough to be of any use except for fuel. It springs up most abundantly where woodlands have been wholly cleared away, and seems mainly to be of use in shading the ground until more valuable trees can take root.

Prunus Virginiana, L.

Choke Cherry. Is most common near streams up to one thousand feet altitude, and conspicuous for its handsome but very

astringent fruit. Sometimes attains a height of twenty or thirty feet, and large enough for firewood, but sprouts so vigorously as to be a pest where more valuable timber is desired.

Prunus pumila, L.

Dwarf Cherry, Sand Cherry. A low, trailing shrub on the sandy shores of the Connecticut and Merrimack rivers, and probably other of the larger streams. The abundant, handsome, dark-red fruit insipid and worthless.

Prunus maritima, Wang.

Beach Plum. A low, straggling shrub, common to the seashore and isolated localities inland as far as Manchester. Fruit dark purple, sometimes an inch in diameter, valuable. This species, like the Canada plum, is worthy of experiment for its fruit.

Prunus serotina, Ehrh.

Black Cherry. A tree often sixty to eighty feet high, with a diameter of two or three feet, the hard, reddish-colored wood taking a high polish, and yearly becoming more valuable for the making of fine furniture, finishing the interior of houses, railroad cars, etc. It does not form extensive tracts of woodland by itself, but may be frequently met with among all species of deciduous trees and in a great variety of soil in all parts of the State below two thousand feet above the sea. The cherry grown in New England is harder to work than that from the Mississippi valley, but it is darker colored, and takes a much higher polish. As cherry lumber brings readily from thirty to sixty dollars per one thousand feet, and is of very rapid growth, it cannot fail to prove an excellent species for planting, the only objection being that it is the host of the tent caterpillar, but the danger to fruit trees from this source is probably exaggerated.

Spiræa salicifolia, L.

Meadow Sweet, White Hardhack. Common everywhere south of the White Mountains in moist lands. A showy plant, but of no utility.

Spiræa tomentosa, L.

Red Hardhack, Steeple-bush. Has the same range as the preceding, but not usually so abundant. Flowers pink, showy.

Rubus odoratus, L.

Purple Flowering Raspberry, Mulberry. * A handsome shrub, with large three to five lobed leaves and large purple flowers. Grows in moist, rocky woods. Common to the northern parts of the State and the Connecticut valley. Fruit of no value, but the plant is worthy of cultivation for ornament.

Rubus strigosus, Michx.

Wild Red Raspberry. Well known everywhere, but is best developed in the White Mountain region and northward. It forms dense thickets in forest clearings, and the abundant fruit is picked and sold in town and city.

Rubus occidentalis, L.

Black Raspberry, Thimbleberry. The black-cap raspberry of cultivation. It propagates itself from the tips of the long, recurved shoots. It is more southern in its range than the preceding, and much less abundant.

Rubus villosus, Ait.

High Blackberry. Much more bushy than the two preceding, and freely armed with stout recurved prickles. It varies in height from a few inches to five or six feet, and each kind of bush seems to represent a different variety of fruit. It is common in most places from the outlet of Umbagog lake and Wells river southward. The fruit abundant, most of it of good quality, and much in demand. Like the red raspberry, it flourishes best where woods have been cleared away.

Rubus Canadensis, L.

Low Blackberry, Dew Berry. Connects with the smallest

*The real mulberry (*Morus rubra*) is a large tree and is found native in Southern New England. It has blackberry-like fruit. Several foreign species were once cultivated as food for silkworms.

forms of the preceding. It is a low, extensively trailing, very bristly shrub, common to the upper terraces of the streams and dry hillsides. Fruit abundant and well flavored; ripe earlier than that of the high blackberry.

Rubus hispidus, L.

Evergreen, Swamp Blackberry. Common to damp, highland woods. It has very slender, trailing stems, evergreen leaves, and small, spicy, sour fruit.

Rosa, L., Rose.

The rose genus in New Hampshire is represented by five native and one introduced species, all Alleghanian.

Rosa Carolina, L. Swamp Rose. Is the largest and is most abundant in the eastern part of the State, being only sparingly found in the lower Connecticut valley. It grows three or four feet high, forming thickets in swamps and low ground.

Rosa blanda, Ait. Smooth Rose. Grows in dry, sterile soils, and is only a small shrub. The earliest flowering species.

Rosa lucida, Ehrhart. Shining Rose. A slender, few-flowered species, with shining leaves. In moist, shady soils; not very common.

Rosa rubiginosa, L. Sweet Brier. Naturalized from Europe, and is common in old pastures in many parts of the State.

Rosa humilis, Marsh Dwarf Rose. This is the *Rosa lucida* of most authors. In dry soil or on rocky slopes.

Rosa nitida, Willd. Sometimes found on the margin of swamps.

Cratægus coccinea, L.

Scarlet-fruited Thorn. A low, bushy tree. Common to the Merrimack valley and eastward. Fruit ovoid, a half-inch in diameter; bright red. The variety *macracantha* has thicker leaves on stout petioles and larger fruit. It might well be considered a distinct species.

Cratægus punctata, Jacq.

A small tree like the above with wedge-shaped, somewhat hairy leaves with prominent veins. The fruit is round, nearly an inch

broad, red or bright yellow. Has a range farther north than the preceding.

Pyrus arbutifolia, L.

Choke-berry. A slender shrub, common to moist grounds. The abundant flowers white or tinged with rose, and the handsome black or purple fruit so astringent as to be worthless.

Pyrus Americana, DC.

American Mountain Ash. A small tree with pinnate leaves, and a bushy habit. It bears a profusion of white flowers, followed by the bright-red fruit, and is well known as an ornamental tree. The common pear can be readily grafted upon it, and flourishes well for a while. It is a highland tree, common to the Connecticut-Merrimack watershed, and very abundant on the sides of the White Mountains, where it sometimes becomes a foot in diameter and thirty feet high.

Pyrus sambucifolia, C. & S.

Elder-leaved Mountain Ash. A small tree, similar to the preceding, found occasionally in the White Mountains.

Amelanchier Canadensis, T. & G.

Shadbush, Wild Sugar Pear, or Service-berry. The first name given because it blossoms when the shad first begin to ascend the rivers. This species presents several well-marked varieties, the largest of which becomes a small tree, twenty or thirty feet high, and from six to ten inches in diameter; the wood solid, heavy, and susceptible of a good polish, but probably never used for anything except fuel. The variety *oblongifolia* bears the largest and best-flavored fruit, and is a tall shrub, growing in moist soils usually but not always. The variety *oligocarpa* is the sub-alpine White Mountain form. In England the fruit of the shadbush is said to be much improved by cultivation, and doubtless something can be made of it by the pomologist.

Ribes Cynosbati, L.

Prickly-fruited Gooseberry. Common to the highlands, and the most widely distributed of our gooseberries. A shrub three

or four feet high ; the fruit well-flavored, but usually covered with spines.

Ribes oxyacanthoides, L.

Smooth-fruited Gooseberry. The Merrimack and the Connecticut river valleys, and eastward to the coast. A smaller shrub than the preceding, with smooth, purple, sweet fruit. This species is worthy of trial for cultivation.

Ribes lacustre, Poir.

Swamp Gooseberry. A low, prostrate species, with much-divided leaves, and black, currant-like, insipid fruit. It is common to the sub-alpine region of the White Mountains, and northward.

Ribes prostratum, L'Her.

Fetid Currant, Skunk Currant. A low, half-trailing shrub. The leaves, flowers, and fruit give out an unpleasant odor, but the fruit is not unpleasantly tasted. It is common to moist highland woods, and extends to the timber line in the White Mountains.

Ribes rubrum, L. *Var. subglanduiosum*, Max.

The Garden Currant. This is native to the White Mountain region and northward.

Hamamelis Virginiana, L.

Witch-Hazel. A large shrub or small tree, everywhere common. It generally throws up several stems from the same root, which are sometimes three or four inches in diameter. Wood white, close grained, taking a good polish ; useful for handles for small tools, and excellent for fuel. Bark medicinal. Remarkable for flowering in the autumn when the leaves are falling.

Cornus florida, L.

Flowering Dogwood. The largest of the genus, being a tree sometimes twenty or thirty feet high, and six inches in diameter ; branches gray, wood dense, heavy, very close grained, and taking a brilliant polish, and is said to be a good substitute for boxwood.

The heads of flowers are surrounded by a large involucre, which makes it very showy. Fruit bright red. It is very ornamental, but seldom seen in cultivation. In this State its range is limited to the southeastern part, and very near to the Connecticut river as far north as Brattleboro, Vt., and very rarely farther north.

Cornus circinata, L'Her.

Round-leaved Dogwood. Stems one or two inches in diameter; four to six feet high, with greenish warty-dotted branches. Leaves large, nearly round, and woolly beneath. Fruit light blue. Connecticut river valley; most common northward.

Cornus sericea, L.

Silky Cornel. Stems slender; few branched, striated with red and brown, one or two inches in diameter, and five to ten feet high. Common near streams up to one thousand feet altitude. Fruit pale blue, and leaves silky beneath.

Cornus stolonifera, Michx.

Red Osier Dogwood. Upper Connecticut valley and White Mountain region. A handsome species, forming large clumps by sending up an abundance of bright red, purple, osier-like shoots, three to six feet high. It spreads freely by subterranean suckers. Fruit lead color.

Cornus paniculata, L'Her.

Panicled Cornel. Shrub four to six feet high, with gray branches. Grows on dry ground, and ranges nearly with the flowering dogwood. Fruit white.

Cornus alternifolia, L.

Alternate-leaved Cornel. Everywhere common in moist woods. Next to the flowering dogwood in size, being sometimes twenty feet high and four or five inches in diameter; branches wide-spreading from near the top, giving it a flat head. Fruit blue. All the cornels are worthy of a place in a collection of ornamental shrubs, on account of both flowers and fruit.

Nyssa sylvatica, Marshall.

Hornbeam, Sour Gum, Pepperidge, or Tupelo. A tree sometimes sixty or seventy feet high, with a diameter of from eighteen inches to three feet, and stiff angular branches. It usually grows in swamps, and in moist, low lands. It is most common in the Merrimack valley, and seldom seen north of the White Mountains. Wood remarkable for its spiral grain, which renders it unwedgeable. It is seldom used in the arts, but if not too soft its non-splitting property would make it a good material for wagon-wheel hubs. It has been thought equal to holly as a cabinet wood, by those who have experimented with it.

Lonicera glauca, Hill.

Small Honeysuckle. A half-climbing shrub, with the smooth leaves joined together at the base, and greenish-yellow flowers. Found sparingly along the Connecticut and its largest tributaries.

Lonicera ciliata, Muhl.

Fly-Honeysuckle. A straggling shrub three or four feet high, with pale yellow flowers and red fruit. Common in rocky highland woods and northward.

Lonicera cœrulea, L.

Mountain Fly-Honeysuckle. Common in moist grounds on the Connecticut-Merrimack watershed, and in the alpine ravines of the White Mountains, and northward. A half-trailing shrub forming matted tufts. Flowers straw color and fruit blue.

Diervilla trifida, Moench.

Bush Honeysuckle. A low, upright shrub, with ovate, taper-pointed leaves, and honey-colored flowers. Fruit a dry capsule. Common everywhere in rocky places.

Sambucus Canadensis, L.

Common Elder. A shrub five to ten feet high, with soft-wooded stems, remarkable for the size of the pith they contain. It is everywhere common. Flowers white. Fruit juicy, black-purple, very abundant, and used in making a medicinal cordial.

Sambucus racemosa, L.

Red-berried Elder. Grows larger and more tree-like than the preceding species, and is sometimes fifteen feet high, with a diameter of three or four inches. Pith brown, and the flowers often purple tinged. Berries bright red, making the plant very showy. This is a highland species, common northward, but seldom seen from the Merrimack valley eastward.

Viburnum Lentago, L.

Sweet Viburnum, or Sheep-berry. A large shrub or small tree, Alleghanian in range, and seldom seen above six hundred feet altitude. The leaves are ovate, sharp-pointed, thick, and shining. Flowers white, as are those of all the Viburnums. Fruit in large bunches, bright blue, edible. Wood hard and heavy, brown ; takes a fine polish.

Viburnum cassinoides, L.

Withe Rod. Stems slender, sometimes two inches in diameter, and six or eight feet high. Grows in clumps, and is everywhere common in wet lands. Fruit blue. Wood gives out a disagreeable odor when burned.

Viburnum dentatum, L.

Arrow Wood. Leaves broad ovate, sharply toothed. Stems slender, very straight, with pale-gray bark. Grows in large bunches, and found everywhere in bogs and very wet places. This species was used by the Indians for the shafts of arrows.

Viburnum acerifolium, L.

Maple-leaved Viburnum. A slender shrub, with three-lobed leaves. Common on the highlands among deciduous trees. Fruit red, turning purple when fully ripe.

Viburnum Opulus, L.

High Cranberry Bush. Shrub five to ten feet high, with light gray bark. Strongly three-lobed leaves, and bright red, acid fruit, which is often used as a substitute for cranberries. The

snowball tree of cultivation is derived from this species. Common from the base of the White Mountains northward.

Viburnum lantanoides, Michx.

Hobble-bush. A low, straggling shrub, the reclining branches often taking root. The leaves are broad ovate, heart-shaped, rusty-scurfy beneath, as are also the tips of the branches. Flowers handsome, in broad, flat cymes. Fruit at first dull red, then black. Common in moist woods everywhere, but especially so northward.

Cephalanthus occidentalis, L.

Button Bush. A coarse, smooth-leaved shrub, growing on the borders of ponds and slow streams in the lower Connecticut valley and Eastern New Hampshire. Flowers greenish white, in globular heads.

Gaylussacia resinosa, T. & G.

Common Huckleberry. A slender, much-branched shrub, one to three feet high, forming a close undergrowth in dry pine woods, etc. Common in Eastern New Hampshire, ranging as far as the base of the White Mountains. Only sparingly found in the lower Connecticut valley, rarely reaching to elevations one thousand feet above the sea on the southern highlands. Fruit usually black, sweet, and pleasant; ripe in August, and extensively gathered and sold.

Vaccinium Oxycoccus, L.

Small Cranberry. A very slender, trailing shrub, with white, spotted berries the size of peas. Chiefly in peat bogs of Coös county. Sparingly found throughout the State.

Vaccinium macrocarpon, Ait.

Large Cranberry. The well-known species whose fruit is extensively sold in the markets. Trailing, like the preceding, but a larger plant. In peat bogs and moist ground of all parts of the State south of the White Mountains.

Vaccinium Vitis-Idœa, L.

Cow Berry, Mountain Cranberry. A low, tufted and matted evergreen, common to the alpine White Mountain region, also rarely on the seacoast. Fruit small, red, abundant, resembling cranberries in flavor, and used for the same purpose.

Vaccinium uliginosum, L.

Bog Bilberry. A dwarf, tufted, alpine species, with black, sweet berries.

Vaccinium cœspitosum, Michx.

Same *habitat* as the preceding, growing in small tufts. Fruit large, excellent.

Vaccinium Pennsylvanicum, Lam.

Dwarf Blueberry, Low Blueberry. Six inches to two feet high, usually forming straggling masses in dry woods and old fields. Common and well known throughout the eastern and southern parts of the State. Seldom seen north of White river in the Connecticut valley. Fruit abundant, blue or black. The earliest blueberry of the markets.

Vaccinium Canadense, Kalm.

Canada Blueberry. A straggling shrub, stouter than the preceding, which it resembles. Leaves and branches downy. Berries often oval, blue, somewhat acid. Upper Coös county, and sometimes farther south; probably never seen in the markets.

Vaccinium vacillans, Solander.

Half-high Blueberry, Sugar Blueberry. Two or three feet high, with upright, slender, yellowish-green branches. Fruit harder and keeping longer than that of any other species; usually very round, bright blue, and spicy. It has the most limited range of any of our blueberries. It is common in the Merrimack valley, and sparingly found very near the Connecticut river as far as the rapids near the mouth of the White river.

Vaccinium corymbosum, L.

High Blueberry. A shrub ten or fifteen feet high, with stems sometimes two inches in diameter. It grows in moist lands and

swamps from the sea level to North Conway, on the eastern side of the State, and along the southern highlands as far as Westmoreland. The wood is hard and very close grained, useful for the handles of small tools. This species yields the greater part of the blueberry crop which is yearly sent to the large towns and cities from New Hampshire. No attempts have been made to cultivate it, although it doubtless could be done.

Arctostaphylos Uva-ursi, Spreng.

Bearberry. A matted, trailing shrub, with insipid red berries. The evergreen leaves used in medicine. Eastern New Hampshire and north to the White Mountains. Not very common.

Arctostaphylos alpina, Spreng.

Alpine Bearberry. A low, matted shrub. The grayish-green, evergreen leaves strongly reticulated. Berries black. Mt. Washington ; rare and seldom seen.

Cassandra calyculata, Don.

Leather Leaf. A low, many-branched shrub, with brownish-green, leathery leaves, and one-sided racemes of small white flowers. Fruit a dry capsule. Forms dense masses in bogs, and along the shores of ponds.

Cassiope hypnoides, Don.

An alpine, trailing shrub, with moss-like leaves and handsome white flowers. Stems only two or three inches high. Probably the smallest shrub in America.

Andromeda polifolia, L.

A handsome little evergreen shrub, rarely found in peat-bogs. Flowers large, white or purple tinged. Leaves with revolute margins ; white beneath.

Andromeda ligustrina.

Male Blueberry, Stagger Bush. Shrub three or four feet high, with yellowish bark. In the same situations and much resembling the high blueberry, but the fruit a dry, globular pod instead of a berry. Sometimes poisonous to cattle.

Clethra alnifolia, L.

White Alder, Sweet-pepper Bush. Shrub five to ten feet high, upright. Leaves wedge-shaped, smooth, and sharply toothed. From the lower Merrimack valley to the coast. In August it bears a profusion of white, very fragrant flowers. Very ornamental, and recommended to plant for bee-food.

Bryanthus taxifolius, Gray.

A small, evergreen, alpine shrub, with linear leaves, and large, handsome, urn-shaped, purple flowers.

Kalmia latifolia, L.

Spoon-wood, Spoon-hunt, or Mountain Laurel. A much branched and contorted shrub four to fifteen feet high, with broad, lance-shaped, evergreen leaves, and bearing a profusion of large white or rose-colored flowers; stems sometimes four inches in diameter. Wood hard, heavy, and close-grained. Grows in swamps and moist, rocky woods, and is very ornamental, but makes an undergrowth very difficult to walk through. It is found in the Connecticut valley as far as Westmoreland, and in the Merrimack, a little north of Concord and eastward to the coast; also on the highlands south of Monadnock.

Kalmia angustifolia, L.

Sheep Laurel, Lambkill. A slender shrub, with oblong, evergreen leaves, which are pale beneath, and bears a profusion of small, deep rose-colored flowers. Has the same range as the preceding, and is poisonous to sheep.

Kalmia glauca, Ait.

Pale Laurel. Stems slender, straggling, eight to ten inches high; leaves oblong, white beneath; flowers few, lilac-purple; sub-alpine and in peat bogs; rare.

Rhododendron viscosum, Torrey.

Swamp Honeysuckle. Shrub four to ten feet high; in swamps near the coast. Flowers fragrant, white, showy, and at the base of the corolla covered with viscid hairs.

Rhododendron nudiflorum, Torrey.

Purple Azalea, June Pink, Election Pink. Shrub two to ten feet high; in swamps and moist ground. Eastern New Hampshire, the highlands around Monadnock, and along the Connecticut to Hanover, N. H., and Hartford, Vt. Often cultivated for the very showy, fragrant, pink flowers.

Rhododendron maximum, L.

Great Laurel. A shrub eight to ten feet high, the broad, wedge-shaped, evergreen leaves six to ten inches long. Stems two to four inches in diameter. Wood hard and fine grained. Flowers large and very showy; rose color, turning white. Swamps. Local in this State at Richmond, Fitzwilliam, near Manchester, North Grantham, etc.

Rhododendron Lapponicum, Wahl.

Lapland Rose Bay. High alpine. Forms broad, carpet-like masses. Leaves oval, an inch long, rusty dotted and scurfy. Flowers very handsome, deep purple.

Rhododendron Rhodora, Don.

Rhodora. Wet woods and swamps. Southern and central parts of the State, and reaches an altitude of two thousand feet above the sea on Monadnock. An upright shrub, two or three feet high. Stems slender, and bearing abundant, large, rose-purple flowers.

Ledum latifolium, Ait.

Labrador Tea. A low, evergreen shrub, with white flowers, and the leaves brown-woolly beneath. Sub-alpine; found in the White Mountain region, and rarely in cold bogs in other parts of the State. *L. palustre*, a species much resembling it, has been found in the extreme northern part of the State.

Loiseleuria procumbens, Desv.

Alpine Azalea. A low, matted evergreen with small, pink flowers, forming carpet-like masses on rocks in the alpine region of the White Mountains.

Ilex verticillata, Gray.

Black Alder, Winter Berry. An upright, slender shrub, the abundant, bright-red fruit growing close to the branches, and persistent long into the winter. Wet grounds. Everywhere common.

Ilex lævigata, Gray.

Smooth Winter Berry. Similar in habit to the last, but the lanceolate leaves shining above, and the larger berries on short stems. Swamps and borders of ponds; southern part of the State.

Nemopanthes fascicularis, Raf.

Mountain Holly. A many-branched shrub, six or eight feet high; bark light gray. The showy, deep-red fruit on long, slender stems. Very abundant on the moist highlands and northward, but common to all parts of the State.

Fraxinus Americana, L.

White Ash. One of the most widely distributed and valuable of our forest trees, but nowhere occurring in large quantities. It grows in a great variety of soils, but attains its best development in a strong, rocky soil, along with the beech, birch, and maple. Although its wood is not so heavy as that of the European ash, it is superior to it in strength and elasticity, and endures exposure to the weather moderately well. It is so well known and adapted to so many different uses, such as carriage-making, the handles for agricultural implements, oars for boats, etc., that it is becoming scarce and more valuable each year. It is of such rapid growth that it is one of the best trees for planting, either for fuel or timber.

Fraxinus pubescens, Lam.

Red or Downy Ash. Alluvial soil in the Merrimack valley as far north as Boscawen. A smaller tree than the white ash, which it much resembles. Not abundant enough to be of much value.

Fraxinus sambucifolia, Lam.

Black or Brown Ash. A medium-sized tree, common to swamps and wet lands throughout the State, but most abundant

south of the White Mountains. The old growth yields lumber much used for interior finishing and cabinet-work. The easily separated layers of the young trees are very tough, and used for coarse baskets and hoops, bands for baling hay, etc. The wood is hard and considered good for fuel, but not very durable when exposed to the weather.

Platanus occidentalis, L.

Buttonwood, Sycamore, or Western Plane-tree. Occurs in the Merrimack valley toward the coast, and along the Connecticut as far as Westmoreland. Generally found very near the streams, and much more abundant formerly than now, as this species, although vigorous enough in the Mississippi valley, appears to be falling into decay and to be gradually disappearing from New England. It is a large and handsome tree. The outer bark flakes off in large scales and shows the white inner bark, thus giving the surface a peculiar mottled appearance. The wood is moderately hard; said to be of value for cabinet-work, but does not bear exposure to the weather. It is easily cultivated, and bears the dust and smoke of cities better than most trees.

Sassafras officinale, Nees.

Sassafras. A tree usually twenty or thirty feet high. Branches irregular. Leaves dark green, entire or lobed. Flowers greenish-yellow, and the fruit blue. Lower Merrimack valley, eastward to the coast, and along the Connecticut valley to Bellows Falls. Wood aromatic, durable, but not usually large enough to be of much use; the bark aromatic and medicinal.

Lindera Benzoin, Blume.

Fever-bush, Spice-bush. A slender shrub, four to six feet high, with ash-gray bark. Leaves oval, dark green. Fruit red. Whole plant aromatic. It has the same range as the sassafras.

Dirca palustris, L.

Leatherwood, Wicopy, or Moosewood. A stout, much-branched shrub, with yellowish bark, the yellow flowers appearing before the leaves. Bark exceedingly tough, and employed by the Indians for thongs. Grows on rich, moist hillsides, and is sometimes cultivated for ornament.

Ulmus Americana, Willd.

White, Weeping, or American Elm. One of the largest and most imposing of our forest trees, never forming groves by itself, yet common from the sea to the base of the mountains. The finest specimens grow in the rich alluvium of the river valleys, and it has been more largely planted along the streets of the cities and villages than any other tree. The wood is light, strong, and tough, with the fibers interlaced; difficult to season without warping, yet it is much used for the naves of carriage-wheels, ox-yokes, etc. It is a very heavy feeder, and consequently of rapid growth, and its ashes are said to yield more potash than those of other trees.

Ulmus racemosa, Thomas.

Cork Elm. Rare; occurs at Meriden and one or two other places. It is common from Western New York to the Mississippi.

Ulmus fulva, Michx.

Red or Slippery Elm. Valley of the Connecticut, usually disappearing within ten miles of the river. Ranges as far north as the mouth of the Passumpsic. A middle-sized tree; heart-wood reddish, heavy, and durable; the mucilaginous inner bark well known in medicine. This species does not occur in quantities large enough to be of practical value.

Celtis occidentalis, L.

Hackberry. A medium-sized tree, resembling the elm, which occurs sparingly along the Connecticut as far as Wells river. This species develops into several botanically interesting varieties, and is common along the streams of the Middle States and the Mississippi valley.

Juglans cinerea, L.

Oilnut or Butternut. A very valuable tree, both for its timber and nuts. When grown in the forest, it is from two to three feet in diameter and sixty feet high, but in open land develops a short trunk, and heavy, wide-spreading top. It prefers the alluvial soil of the river valleys, or fertile, moist hillsides, and is common

throughout the Connecticut valley and along the Merrimack and its tributaries to the base of the White Mountains. It is one of our best trees for timber culture, but such a gross feeder that it should not be planted near cultivated fields.

Carya alba, Nutt.

Shagbark Hickory. The largest and most valuable of our hickories. In the eastern part of the State it ranges to Lake Winnipesaukee, and in the Connecticut valley to Windsor, Vt. Never found naturally very far from the alluvium of the streams, but will grow in almost any well-drained soil when planted. The nuts are readily sold at from two to four dollars per bushel, and bring a considerable revenue to some of the farmers of the lower Merrimack. The wood is considered the standard fuel, and first class for carriage-work and tool handles of various kinds. It should be largely planted, and the work not left wholly for the squirrels to do, as is now the case.

Carya porcina, Nutt.

Pig Walnut or White Hickory. A much smaller tree than the preceding, seldom being more than eighteen or twenty inches in diameter, but in the forest it grows tall and slender. Wood very valuable for ax-handles, wagon-thills, spokes, hoops for cooperage, etc. Nuts sweet and edible, but not equal to those of the shagbark. It is common in the lower Merrimack valley and towards the coast. In the Connecticut valley it is abundant on the hills near the river in the vicinity of the state line, but is not common above Bellows Falls.

Carya tomentosa, Nutt.

Called Mocker Nut or Black Hickory in the South and West. In New Hampshire it is found sparingly near the coast. The quality of the wood resembles that of *C. porcina*, but it becomes a larger tree.

Carya amara, Nutt.

Bitter Hickory, called also Pig Walnut. A tall, slender, very smooth-barked species, worthless except for fuel, as the wood is

brittle and free grained. Interesting botanically because it finds its eastern limit in the Connecticut valley, where it ranges farther north than any other of our hickories, the limit being at Wells river. Fruit very thin shelled, and the kernel intensely bitter. It prefers a moist, fertile soil, and at the West, where it is common, it is called swamp hickory.

Quercus alba, L.

White Oak. The most valuable of our oaks. Seldom seen at elevations much above six or seven hundred feet above the sea. It grows to a large size, and New Hampshire white oak in quality is unequaled by any grown in the United States. It is put to a greater variety of uses that require strength, hardness, and elasticity, than any wood we have. Very little of the old growth, formerly in demand for ship-building, is left. This species prefers a strong, well-drained soil, and grows from the acorns much faster than is generally supposed, and should be fostered as much as possible. It is most abundant in the eastern part of the State. In the Connecticut valley it is confined to the hills in the immediate vicinity of the river, extending up the tributary streams a short distance, and disappears entirely before reaching the mouth of the Passumpsic.

Quercus bicolor, Willd.

Swamp White Oak. A large-sized, very rough-barked, valuable species, growing in low, moist ground throughout eastern Massachusetts; occurs in the Merrimack valley as far as the mouth of the Souhegan, and probably extends throughout Rockingham county.

Quercus Prinus, L.

Rock Chestnut Oak, Mountain Oak. A medium-sized tree. The wood strong and durable, and considered excellent for railroad sleepers. Occurs in belts or patches in the eastern part of the State, as at Amherst and Milford. In the Connecticut valley it barely reaches our limits on the hills of the southern part of Winchester and Hinsdale.

Quercus prinoides, Willd.

A dwarf species, making thickets on the sandy plains of the lower Merrimack, and eastward to the coast. Wood too small to be of value.

Quercus ilicifolia, Wang.

Barren or Scrub Oak. Has the same range as the last, and also appears along the lower Connecticut. A much branched and contorted shrub, six to fifteen feet high, forming dense thickets; very difficult to eradicate, and impeding the growth of better timber.

Quercus tinctoria, Bartram.

Black or Yellow Oak. A large species, common to the lower Merrimack valley and eastward; absent on the highlands, and only seen again within three or four miles of the Connecticut river, ceasing at North Charlestown. The wood is elastic, strong, free-splitting, and durable, the bark very rich in tannin, and gives a yellow dye. This species is not valued as its merits deserve, for it would serve equally as well as white oak for many purposes.

Quercus rubra, L.

Red Oak. The most widely distributed and largest of our oaks. Very common in all parts of the State up to 1,500 feet above the sea, and only disappears in Coös county, far north of the White Mountains. The timber is not nearly so heavy as that of our other species, but, from the freedom with which it could be split and worked, the old growth has been mostly cut and manufactured into staves for molasses hogsheads, an industry which flourished thirty or forty years ago, but has now disappeared from our State, owing to the scarcity of mature timber. Red oak grows much more rapidly than the other kinds, and attains a diameter of four or five feet, with a height of seventy or eighty. The younger growth is now much used for the bent work in chair manufacture.

Fagus ferruginea, Ait.

Beech. This is essentially a highland tree, and does not become common until an altitude of five hundred feet above the sea

is reached. It is a common tree on the Connecticut-Merrimack watershed, and enters largely into the composition of the hardwood forests of Coös county. In the southern part of the State the best of it has been cut and used for chair-stock, bucket-hoops, etc. As it depends upon the seed alone for its propagation, it does not hold its own well in company with other trees, but is considered a valuable tree to grow. Wood dense and heavy; not very liable to warp, but easily perishable when exposed to the weather.

Castanea sativa, Mill. *Var. Americana.*

Chestnut. This well-known and very valuable tree has a rather limited range in this State. The largest area where it flourishes is in the Merrimack valley south of Concord, although it occurs sparingly considerably north of that. In the Connecticut valley the most of it grows in the towns of Hinsdale, Winchester, and Chesterfield, but it grows near the river as far north as Windsor, Vt. The large timber has long ago been cut, but it is of such rapid growth that it yields large quantities of railroad ties in short periods of time. The wood is very durable when exposed to the weather, and has been much employed in fencing. It is much used as a cabinet wood, and for interior work of houses, building-timber, etc., and its planting should be encouraged wherever it will grow. It flourishes best in strong, well-drained soil.

Corylus Americana, Walt.

Common Wild Hazel. A slender shrub, forming dense thickets, mostly in the river valleys and southern exposures on the hillsides. Stems sometimes two inches in diameter, eight to fifteen feet high. Nuts edible; smaller than the English filbert, which they resemble; inclosed in a leathery, rounded involucre. The squirrels get the bulk of the fruit. Possibly it might be improved so as to rival its English cousin.

Corylus rostrata, Ait.

Beaked Hazel. A smaller species than the preceding. Commonest northward, in rich woods. Fruit inclosed in a long, beaked involucre, and in size and quality closely resembling the preceding species.

Ostrya Virginica, Willd.

Hop Hornbeam, Iron-Wood, Lever-Wood. A slender tree, with light-colored bark, brown-tipped branches, and birch-like leaves. Fruit inclosed in inflated sacs, which resemble those of the hop. Seldom more than forty feet high, with a diameter of a foot or eighteen inches. Wood white, very hard and stiff. Occurs in all parts of the State, but most abundantly along the high lands and northward.

Carpinus Caroliniana, Walt.

American Hornbeam, Blue or River Beech. A large shrub or low tree, with wide-spreading branches, and blue-gray, fluted trunk. Wood hard, white, and heavy, but too small to be of much service. Grows throughout the State, near the larger streams. Both this tree and the one mentioned above are sometimes known as iron-wood.

Myrica Gale, L.

Sweet Gale. Shrub two or three feet high, growing along the borders of ponds and in wet places. Found chiefly south of the White Mountains. Leaves aromatic.

Myrica cerifera, L.

Bayberry, Wax Myrtle. A shrub from three to eight feet high, with deep green, shining, resinous-dotted, very fragrant leaves. Fruit a bony nut, incrusted with a white wax, which is sometimes collected under the name of "Bayberry tallow." Common near the sea, somewhat frequent in the Merrimack valley, but only in one or two localities in the southwestern part of the State.

Myrica asplenifolia, Endl.

Sweet Fern. A low, bushy shrub, with sweet-scented, fernlike leaves. Grows best in dry, sterile localities, and is common throughout the eastern part of the State. Ranges with the white oak in the Connecticut valley.

Betula lenta, L.

Black Birch. A tree sometimes two to four feet in diameter, but usually not more than eighteen inches or two feet. Bark

dark-colored, scaling from the trunk when old; heart-wood reddish, this species therefore sometimes called cherry or mahogany birch. The wood is heavier than that of the other birches, and takes the best polish, is much used in turning and cabinet-work, and makes a superior fuel. Its range is from the seacoast westward over the southern highlands, and in the Connecticut valley finds its northern limit a little beyond that of the chestnut.

Betula lutea, Michx.

Yellow Birch. The largest of our birches, often three or four feet in diameter, and sixty or seventy feet high. The bark of the young trees is yellow, whence comes the common name. It grows in all parts of the State, but is most abundant in places which are more than five hundred feet above the sea level. The wood is nearly as valuable as that of the preceding species, which it much resembles in grain and density. It is much used in chair manufacture, and, like all species of birch, yields superior charcoal.

Betula papyrifera, Marshall.

White Birch, Canoe Birch. This species is found in all parts of the State, but may be called one of the types of the Canadian division of our flora, as it is the most common on highlands, and only ceases to exist when the alpine area of the White Mountains is reached. It is conspicuous because of its very white bark, which was used by the Indians for making their canoes; and as it is easily separated into thin layers, it can be used for a variety of purposes, like the making of baskets, etc. This tree is sometimes two or three feet in diameter, and sixty or seventy feet high; the wood moderately hard, yet capable of a good polish, and much used for spools, bobbins, chairwork, boxes, etc., and, when properly cured, makes a good fuel, but very easily decays on exposure to the weather. Being of very rapid growth, it is of value for quickly reforesting lands, and preparing for a growth of oak or other slow-growing trees.

Betula nigra, L.

River or Red Birch. A medium-sized tree found sparingly near streams in the southern part of the State. The leaves are acutish

at both ends and downy underneath, as is also the fruit. The wood is light colored.

Betula populifolia, Ait.

Poplar-leaved, White or Gray Birch. A slender tree of small diameter, and dingy white bark. Common to Eastern New Hampshire, ranging as far north as Conway and around the base of Monadnock, and along the Connecticut to Westmoreland. Wood useful as fuel in the vicinity of the large villages, but back from such markets it is of more value as a material for making charcoal, for which it is excellent. The young shoots are much used for hoops, in the making of fish barrels, nail kegs, and other coarse cooperage. As it is easily grown from the seed, and succeeds well in the most sterile soils, it could probably be used for a nurse in the starting of pine and other trees, which will not grow in such places without some protection when first sown.

Betula pumila, L.

Low Birch. Shrubby; two to eight feet high. Near Lake Winnipesaukee and in the White Mountain region. Rare.

Betula glandulosa, Michx.

Dwarf Birch. A slender, half-trailing species, confined to the alpine region of the White Mountains.

Alnus viridis, DC.

Green or Mountain Alder. A stout shrub, with bright green-colored branches. Forms dense thickets in the sub-alpine ravines of the White Mountains, and occurs sparingly throughout Coös county and further south on the Connecticut river.

Alnus incana, Willd.

Common or Speckled Alder. A tall shrub, with stems one to four inches in diameter, and having few branches. Well known as forming thickets along all of the smaller streams, and in swampy places. Wood soft, of some use for fuel, and the charcoal made of it sometimes used in the manufacture of gunpowder.

Alnus serrulata, Willd.

Smooth Alder. This shrub is much like the preceding, and found in similar localities, but is much less common in Northern New England than further south, where it is very abundant.

Salix candida, Willd.

Hoary Willow. Shrub six or eight feet high, with narrow, lance-shaped leaves, downy above and white woolly beneath. In bogs from Lancaster northward, and on the upper Androscoggin.

Salix tristis, Ait.

Dwarf Gray Willow. Low and slender; a foot or two in height, with downy or gray woolly leaves and tips of the branches. Near the coast, around Nashua, and rarely in the southwestern part of the State. Forms low masses in very dry, sterile soil.

Salix humilis, Marshall.

Prairie Willow. Usually three or four feet high, with wedge-oblong, downy or woolly leaves. Runs into many varieties, and is the common dwarf willow of hillsides and barren plains.

Salix discolor, Muhl.

Pussy Willow, Glaucous Willow. Treelike, ten or fifteen feet high, large enough for fuel. Low grounds and moist hillsides. Flowers golden. Among the earliest of the willows.

Salix sericea, Marshall.

Silky Willow. A slender species, forming upright clumps five or six feet high, in the vicinity of streams; leaves very narrow, smooth above, fine silky beneath. Flowers greenish.

Salix petiolaris, Smith.

This willow is sometimes found with the preceding species, and is very similar in habit, but with smoother leaves and long-pedicelled fruit.

Salix cordata, Muhl.

Heart-leaved Willow. Stems five or six feet long; inclined, or half-trailing; leaves narrow, heart-shaped at the base. The commonest willow along the sand-bars and banks of the larger streams.

Salix rostrata, Richardson.

Livid Willow. Ten or fifteen feet high; usually with a short trunk and a much-branched head. Leaves very veiny, and livid when first expanding in spring. Common throughout the highlands. Prefers rather dry soil.

Salix phylicifolia, L.

Green Willow. Alpine ravines of the White Mountains; rare, and little known.

Salix lucida, Muhl.

Shining Willow. A very handsome species; rather common near streams. Usually ten or fifteen feet high, with broad, ovate, taper-pointed, shining leaves. Worthy of culture for ornament.

Salix nigra, Marsh.

Black Willow. The only one of our native species which rises to the dignity of a tree. This one is often forty feet high and a foot in diameter. It confines itself very closely to the borders of the larger streams. The leaves are very long and narrow, taper-pointed.

Salix alba, L.

White Willow. This species, which often becomes a tree three or four feet in diameter, was introduced from Europe, and has become well naturalized throughout most parts of the State. The wood is light, strong, and durable, and useful for many purposes. This species is the one so extensively planted in the Western States for wind-breaks, fencing, and fuel. With us it is better than any other tree to plant along river banks where they are in danger of being undermined by freshets. There are numerous varieties.

Salix fragilis, L.

Crack Willow. This also is a large tree, early introduced along with the white willow, with greener and smoother leaves, and longer fruit which is plainly stalked. It occurs in many hybrid forms throughout New England.

Salix longifolia, Muhl.

Long-leaved Willow. A common Western species, which finds its eastern limit along the Connecticut river, occurring from Westmoreland to the Massachusetts line. The slender shoots are better than any other American species for basket-work.

Salix uva-ursi, Pursh,
Salix argyocarpa, Anderson, and
Salix herbacea, L., are all dwarf alpine species, chiefly confined to the treeless area of Mt. Washington.

Empetrum nigrum, L.

Crow berry. A low, matted, evergreen shrub, common in the alpine White Mountain region ; fruit black.

Populus tremuloides, Michx.

American Aspen. Called Quaking Asp in the Rocky Mountains. The most widely distributed of our poplars, being found in all parts of the State, up to 3,000 feet altitude, and in all varieties of soil except deep swamps. Usually a small tree ten to eighteen inches in diameter, and forty to sixty feet high. Springs up oftentimes in great abundance where woodlands have been entirely cleared. The wood, when seasoned under cover, makes excellent fuel, but it easily decays when exposed to the weather. This species until recently was considered nearly worthless, but has now become of considerable value for the manufacture of pulp for paper.

Populus grandidentata, Michx.

Large-toothed Aspen, or Black Poplar. Ranges nearly with the last-mentioned species, but most abundant within the altitudes of 500 and 2,000 feet above the sea. A tree much larger

than the Quaking Asp, being sixty to eighty feet high and two feet in diameter. Wood very white, of light weight, and strong, — good for furniture, interior work, and for paper-making.

Populus balsamifera, L.

Balsam Poplar; both it and the variety *candicans*, known as Balm of Gilead. A large species. With us it is native to the Connecticut valley, generally near the river, becoming more plentiful northward. The variety *candicans* is rarely found in a wild state, but is the form commonly planted, and botanically it seems to be a transition between this and the next species. This poplar is a very rapid grower, and makes large timber. The wood is very soft, tough-grained, and easily decays. It spreads so rapidly by shoots from the roots as to become a pest where the land is at all valuable, but it could often be employed in waste lands where a quick-growing tree is desirable for fuel.

Populus monilifera, Ait.

Necklace Poplar. This and the preceding species are known through the West as "Cottonwood." It barely comes within our limits, being confined to the immediate vicinity of the Connecticut river, and disappears near the northern part of Westmoreland. It is a large, handsome tree, and probably would be equal to the other poplars for paper-making.

Pinus Strobus, L.

White Pine. The largest, most useful, and having the greatest range of distribution of our conifers, being everywhere common, from the sea to 2,500 feet altitude. Originally two great belts occupied the valleys of the Merrimack and Connecticut, which contained some of the finest timber in New England; but this magnificent forest has long since disappeared, a few scattered remnants only remaining. Specimens have been known which were more than two hundred feet high and six or eight feet in diameter. The white pine seeds very freely, and the site of the ancient forest is indicated by tracts of vigorous saplings which in twenty or thirty years are good to cut for pail and fish-barrel staves, laths, clapboards, box boards, etc., and in sixty years yield

good timber and boards. Springing up as it does on so many worn-out and abandoned farms, it has made industry and wealth possible to many parts of the State which otherwise would have been wholly deserted. As it is our most useful evergreen, so it is the easiest to be made to grow, or it could not hold its own so well against the constant cutting to which it is subjected, and in any scheme of forest culture in our State it must hold the foremost place.

Pinus rigida, Miller.

Pitch Pine. This and the next species may be considered types of the Alleghanian division of our flora, because at their upper limit they approximate very closely to the contour line of six hundred feet. The pitch pine, when fully grown, is from fifty to seventy feet high, and two feet in diameter, with heavy, very resinous wood, which is well suited for flooring and building timber; but the old growth, which accords with this description, has nearly disappeared, and the second growth is short and scrubby, better adapted to fuel than anything else; the wood also makes good charcoal. It is most common from the Merrimack valley to the sea and to the base of the White Mountains. It delights in dry, sterile soil, and forms large tracts of woodland on the broad sandy plains of the Merrimack valley and lake region. It is to be met with, where the soil is favorable, in the southern highlands up to 1,000 feet above the sea, and along the Connecticut to the mouth of the Passumpsic.

Pinus resinosa, Ait.

Red Pine, also commonly called Norway Pine, a name which is erroneous, as this tree is not a native of Europe. The botanical name also is a bad one, as the wood is not specially resinous. It is a very handsome species, growing from sixty to eighty feet high, holding well its diameter, and makes excellent building timber and floor boards. It ranges with the pitch pine, but is less common, being usually in groves of from a few acres to several hundreds in extent. It will grow well in the sterile soil preferred by the pitch pine, and as it is so much more valuable as a tree, it is preferable for planting in such places. During the first twenty years of growth it attains a larger diameter than either the white or pitch pine.

Picea nigra, Link.

Black Spruce. Belongs to the Canadian division of our flora; the most abundant conifer of upper Coös, the White Mountain region, and the higher parts of the Connecticut-Merrimack watershed; next to the white pine, the most important evergreen, and, with the balsam fir, the last to give way to the alpine White Mountain area. It there becomes dwarfed, with a short trunk, two or three feet high, with dense branches, spreading twenty-five or thirty feet, making a mat strong enough to walk upon. Its timber composes the greater part of the drives of logs which are annually floated down the Connecticut, Merrimack, and Androscoggin. The wood is light, elastic, and strong, valuable for a great variety of uses, both for inside and outside work, paper pulp, etc. In the White Mountain region and northward it grows very rapidly, but on the southern highlands, where the old growth has been mostly removed, the younger does not seem to start quickly, and the timber is coarse and knotty.

Picea alba, Link.

White Spruce. A Canadian species, abundant around the sources of the Connecticut, disappearing at the Fifteen-mile falls on that river. It is a medium-sized tree, the wood similar to that of the black spruce, but the tree more symmetrical in outline, with light-colored bark and a bluish-green appearance to the leaves.

Abies balsamea, Miller.

Balsam Fir. Ranges with the black spruce, and equally common with it in the White Mountains and Coös county. In the southern part of the State, around the sources of the Contoocook and Miller's rivers, are extensive swamps where this is the prevailing timber. It is the most symmetrical of the spruces; sometimes attains two feet in diameter; is short lived, and until recently considered worthless, but is now considered to be good for boards and shingles, which bear exposure to the weather as well as the hemlock. The trunk is covered with large blisters, which yield the Canada balsam employed in medicine and microscopy.

Tsuga Canadensis, Carriere.

Hemlock. The most widely distributed of our spruces, ranging from the sea to 2,000 feet altitude in the White Mountains, and disappearing before reaching upper Coös county, but appears again in the valley of the St. Lawrence. A large tree, and when young the most graceful of our conifers; well adapted for ornamental planting. Its bark is so much sought after for tanning leather, and the wood for boards, shingles, and building timber, that the old growth is mostly gone. It does not seed so freely as the pines, but with a little care and protection can be easily grown, and a tract of hemlock forest would probably yield a revenue next to that of one of white pine.

Larix Americana, Michx.

American Larch, Hackmatack, Tamarack. The only deciduous-leaved conifer found in the northeastern part of the United States. A tall, slender tree, preferring cold, highland swamps, but occasionally met with in Eastern New Hampshire. In Cheshire county, south of Monadnock, on the watershed of the Contoocook and Miller's rivers, are great swamps where the tree is very abundant. Then in Dalton, Lisbon, Whitefield, and Bath in the Connecticut valley, and Milan, Millsfield, and Dummer on the Androscoggin, it appears in great quantity. The roots strike out at right angles from the trunk, generally three or four very large ones. The tree is dug up, and four or six feet of the trunk taken off with the roots, to be sawed up into the "knees" used in ship-building. The timber is hard, very heavy, and moderately durable when exposed to the weather. Probably inferior to the European larch, but would be a good tree to grow upon lands that cannot be easily drained.

Thuya occidentalis, L.

Arbor Vitæ, or White Cedar. This may be considered the typical conifer of the Canadian division of our flora, being mostly confined to the upper part of Coös county, disappearing in the Connecticut valley at the White River narrows near Hanover, and only seen in a few isolated localities south of the White

Mountains. This tree has light, soft, very durable wood, excellent for shingles, fencing, telegraph poles, etc. It sometimes attains a diameter of three feet, but not usually more than eighteen or twenty inches, and a height of fifty or sixty feet. It is much used to plant for evergreen hedges, and in this form is common in all towns and villages.

Chamæcyparis sphæroidea, Spach.

White Cedar, Cypress. Until recently classed botanically as a true cypress. With us it is limited to Rockingham county near the coast, in deep swamps and marshes. A middle-sized tree, with wood similar to that of the arbor vitæ. Useful for boat-boards, shingles, telegraph poles, and fencing.

Juniperus Virginiana, L.

Red Cedar. A small tree, growing in dry, sterile soil. It is most frequent in the southeastern part of the State. Appears in the Connecticut valley sparingly as far as Haverhill, and found also in Hart's Location. Wood very durable, and valuable for fuel and fencing, and the handsome, deep-red heart-wood for ornamental purposes. It has the slowest growth of any of our conifers.

Juniperus communis, L.

Savin. A prostrate, wide-spreading shrub, which sometimes overruns worn-out lands. Has the same range as the red cedar.

Taxus Canadensis, Willd.

Canadian Yew, or Ground Hemlock. Much like the savin in habit, has brownish green leaves, the fruit becoming fleshy, resembling a red berry. Grows in cold, deep woods throughout the State.

PART II.

Agricultural Experiment Station.

Second Annual Report.

BOARD OF CONTROL.

Hon. Warren Brown, *President.*
Rev. S. C. Bartlett.
Hon. George A. Wason.
Hon. S. B. Whittemore.
Prof. G. H. Whitcher, *Secretary.*

OFFICERS.

G. H. Whitcher, *Director.*
A. H. Wood, *Supt. Dairy Department.*
H. H. Lamson, *Microscopist.*
F. W. Morse, *Chemist.*
C. L. Parsons, *Assistant Chemist.*
C. H. Pettee, *Meteorologist.*
J. M. Fuller, *Station Farmer.*
C. W. Whitcher, *Clerk.*

STATE OF NEW HAMPSHIRE.

To His Excellency the Governor of the State of New Hampshire:

SIR, — I have the honor to herewith transmit the second annual report of the New Hampshire Agricultural Experiment Station, as is required by the act of Congress under which this station is organized.

WARREN BROWN,
President of Board of Control.

REPORT OF DIRECTOR.

To the Board of Control of the New Hampshire Agricultural Experiment Station:

GENTLEMEN, — The second annual report, which I herewith respectfully submit, covers the twelve months from January 1, 1889, to January 1, 1890. Its delay is due to the fact that there is no provision for publishing such a report except at such times as the State Legislature convenes; and as its value depends largely upon the promptness with which it reaches the public, I would call your attention to the importance of making some arrangement whereby each year's work may be published as early as practicable after the close of the calendar year.

During the year 1889 the board of control has been called together three times.

At its first meeting, January 8, 1889, Mr. F. W. Morse was made chemist. It was also voted to conduct co-operative field work among the farmers, provided suitable men could be found who would undertake the work.

At the meeting of March 13, 1889, an appraisal of all property was made, which was published in the first annual report.

At the last meeting of the year, June 25, steps were taken toward building a new stock barn, the need of which has been seriously felt.

PLAN OF WORK.

There has been no essential change in the lines of work laid out at the organization of this station. The details

have been modified to meet new conditions, but I am still of the opinion that dairy work is and will continue to be an important matter to New Hampshire farmers.

Plant and animal nutrition, or the feeding of crops and the feeding of cattle, must always occupy much of our time. To grow successfully the food required by our live-stock, and to convert this food into animal products, are problems which require careful study. Nor are they problems of small magnitude. Roughly estimated, the value of the food required to winter the live-stock of our State is about $6,000,000, and a saving of one per cent of this cost saves four times the annual cost of running the station. In saving and using the manures which result from feeding this live-stock there is a possibility of considerable improvement over the average practice of to-day; and while I do not believe that these changes can be brought about suddenly, or, in fact, that they can ever be fully accomplished, yet much has been done and much more is sure to be done by persistent work on the part of all agricultural organizations; and it is the legitimate work of the experiment station to collect and disseminate information touching on these and kindred points, thoroughly testing various methods, both in field and in barn.

The first year's work in testing breeds of cows has been of a very satisfactory nature, but I have thought it best to wait until three years' records have been completed before issuing any bulletin on this important matter.

ABSTRACTS OF BULLETINS ISSUED.

Bulletin V.—Fertilizers and Fertilizing Materials.

This bulletin was designed to give information concerning the chemical composition of plants and the source of the elements which are necessary for the growth of perfect crops. The elements which come from the air in a

crop of twenty tons of ensilage corn amount to 39,479 pounds. The part that is known to come from the soil, namely, the ash, amounts to 408 pounds, while the nitrogen, the source of which is in dispute, equals 113 pounds. It is probable that the greater part of this comes from the soil, hence we must look to the ash and nitrogen if we would guard against soil exhaustion. Of the constituents most commonly lacking in impoverished soils are, —

Potash	120 lbs.
Phosphoric acid	44 "
Nitrogen	113 "

DEFINITIONS.

Plant food is any substance that can contribute towards the growth of a plant ; e. g., carbonic acid, water, ammonia, potash, etc. All plant food may be divided into two classes :

1. *Abundant plant food*, that is, plant food which is usually found in great abundance in the soil or in the air, including lime, iron, magnesia, silica, soda, sulphur, water, and carbonic acid.

2. *Deficient plant food*, including potash, phosphoric acid, and nitrogen.

A crop of hay amounting when cut to 12,000 lbs., or 4,000 lbs. when cured, contains 11,775 lbs. of substances coming from the air, 180 lbs. of ash coming from the soil, 45 lbs. of nitrogen. The deficient plant food amounts to 139 lbs., made up of phosphoric acid 17 lbs., potash 77 lbs., nitrogen 45 lbs.

Every soil has a certain natural capacity for producing crops, and if for a long term of years a half ton of hay can be annually harvested from a certain field, then it shows that that soil year by year yields in an available form a sufficient amount of plant food to grow this crop. This plant food comes from the vast store which is frequently found even in poor soils, but which is so locked

up that plants fail to get at it; but by the action of frost, air, water, and ferments a small quantity is yearly made soluble and available.

If, therefore, we are to supply what is necessary, we must deduct that portion which is thus rendered available yearly from the total amount required by the crop, and the balance will show what must be added. However, as a part of what is supplied will never be taken up by the plant, it follows that more than this difference must be added to the soil.

SOURCES OF PLANT FOOD.

We are now in position to inquire about the sources of plant food, and for our present purposes only the deficient plant food will receive attention, that is, nitrogen, phosphoric acid, and potash.

Farmyard manure is the chief source of plant food in mixed agriculture. It consists of two parts, solid and liquid; the solid portion represents that part of the food which is not digested in the animal system, while the liquid manure contains the waste products of the digested food.

Ordinary farmyard manure, from cows, oxen, and growing cattle, has the following average composition. The composition of horse manure, sheep manure, and hog manure, is also given.

In 1,000 lbs. of Manure.	Oxen, Cows, etc.	Horses.	Sheep.	Hogs.
Water	781.00	713.0	646.0	724.0
Dry matter	219.00	287.0	354.0	276.0
Ash	40.77	33.0	36.0	26.0
Potash	4.80	5.3	6.7	6.0
Lime	8.11	2.1	3.3	.8
Magnesia	1.41	1.4	1.8	.9
Phosphoric acid	2.33	2.8	2.3	1.9
Nitrogen	4.82	5.8	8.3	4.5

In order that we may be able to know the actual amount of plant food applied to an acre in any given case, I will give the best available figures showing the weight of a cord of manure.

Manure from neat cattle and sheep will weigh not far from 8,000 pounds, or four tons per cord; horse manure, 6,000 pounds, or three tons; while hog manure, as usually found, will probably weigh more than either of those given. As manure is ordinarily drawn in a cart holding forty bushels it will require three loads, without treading, to make a cord. The number of cords and tons may thus be estimated with considerable accuracy. In the following table I have figured the actual plant food per ton, per cord, and per load of one-third cord:

DEFICIENT PLANT FOOD IN MANURE.

Manure from		Per ton. lbs.	Per cord. lbs.	Per load. lbs.
Neat Cattle	Nitrogen	9.64	38.56	12.85
	Phosphoric acid	4.66	18.64	6.21
	Potash	9.60	38.40	12.80
	Total plant food	23.90	95.60	31.86
Horses	Nitrogen	11.60	34.80	11.60
	Phosphoric acid	5.60	16.80	5.60
	Potash	10.60	31.80	10.60
	Total plant food	23.80	83.40	27.80
Sheep	Nitrogen	16.60	66.40	22.10
	Phosphoric acid	4.60	18.40	6.10
	Potash	13.40	53.60	17.90
	Total plant food	34.60	138.4	46.10
Hogs	Nitrogen	9.00	36.00	12.00
	Phosphoric acid	3.80	15.20	5.00
	Potash	12.00	48.00	16.00
	Total plant food	24 .80	99.20	33.00

BONES.

One of the earliest substances used as a fertilizer, aside from manures, was bone. Waste bone chips and horn parings were first used about 1750, and later, say about 1780–1800, bones became a comparatively common manure in England and Scotland for turnips. An average sample of bone will have the following composition per one hundred pounds: Thirty pounds of animal matter containing $2\frac{1}{2}$ pounds of nitrogen, and 70 pounds of ash containing 58 pounds of phosphate of lime, made up of 24 pounds phosphoric acid and 34 pounds of lime, the remaining 12 pounds consisting of magnesia, carbonate of lime, etc.

It was found by various experiments that the phosphoric acid in the bone was the chief cause of the well-known effect of bone fertilizers.

In 1839 Liebig first suggested the use of sulphuric acid for "cutting" bone to make the phosphoric acid available, thus producing a superphosphate

South Carolina rock is a form of phosphate of lime which is now very largely used as a substitute for bone.

Bone-black, a waste bone charcoal from the sugar refineries, is another source of phosphoric acid.

Thomas slag, a waste product from steel furnaces, is a comparatively new article claiming attention as a supplier of phosphoric acid.

POTASH.

Wood ashes and the German potash salts are the chief sources of this form of deficient plant food.

NITROGEN.

Nitrate of soda (Chili saltpetre), sulphate of ammonia from gas-works, dried blood, meat and fish scrap, are all used to furnish nitrogen.

The following table shows the amount and kind of plant food furnished in the substances named; also the average

cost per hundred in Central New Hampshire, and the weight of an even half bushel of each substance :

		Name of Substance.	Plant Food.	Cost per 100.	Wt.
Phosphoric acid (P_2O_5).	Insoluble.	Raw bone	* 24	$1.75	....
		Bone-black	28	1.30	38
		South Carolina rock	28	1.25	52
		Bone ash	35	.....	....
	Soluble.	Dissolved S. C. rock	16	1.25	30
		" bone-black	16	1.50	30
		" bone	16	1.75	....
	Part reverted. (6 per ct.) Part insoluble (15 per ct.)	Thomas-Gilchrist slag	21	1.25	....
Potash (K_2O).		Wood ashes	6	0.50	23
		Muriate of potash	50	2.40	34
		Sulphate of potash	22	.....	...
		Sulphate of potash (high grade)	50	3.50	40
		Kainit	12	.75	39
		Krugit	8	.75	39
Nitrogen (N).		Dried blood	12	2.00	19
		Fish waste	7	.....	....
		Bone	† 2.5	1.75	....
		Nitrate of soda	15	3.00	44
		Nitrate of potash	13	5.00	....
		Sulphate of ammonia	20	4.00	31

* And two and one half per cent of nitrogen.

† And twenty-four per cent phosphoric acid.

Bulletin VI. — Use of Fertilizers.

The following points should be considered in the practical use of fertilizers :

1. The amount of materials required by crops.

2. Utilization of manures, ashes, and other waste products which are produced on the farm.

3. The purchase of the most economical fertilizing materials as aids to the home supply.

4. The use of all fertilizers with a view to getting their valuable parts taken up by the crop in as short a time as possible.

The following table shows what amount of deficient plant food is removed by certain crops :

Name of Crop.	Weight as harvested.	Weight after shrinkage.	Nitrogen.	Phosphoric acid.	Potash.
	lbs.	lbs.	lbs.	lbs.	lbs.
Corn { Sound, 97 bushels . Soft, 15 bushels.... }	4,390	3,512	20.55	16.27	71.07
Corn fodder.....	5,352	4,281	56.19	19.32	11.59
Total			76.74	35.59	82.66
Oats { Grain, 47½ bushels..	1,520	1,292	24.82	7.11	5.43
Oats { Straw	5,267	4,740	18.96	8.53	45.98
Total			43.78	15.64	51.41
Hay.....	6,202	4,961	60.30	21.09	95.51
Potatoes, 200 bushels.....	12,000	.....	38.40	21.60	67.20
Clover, 1½ tons.....	.....	3,000	64.32	16.80	58.50
Wheat { Grain, 15 bushels...	.....	930	19.18	7.63	5.11
Wheat { Straw, 1 ton.....	.....	2,000	6.40	4.60	9.80
Total			25.58	12.23	14.91
Beans, 20 bushels.....	.....	1,240	50.59	14.38	14.88
Bean vines.....	.....	1,500	24.48	6.15	30.05
Total			75.07	20.53	53.73
Ensilage, 20 tons.....	.....	.....	113.00	44.00	120.00

USE OF FARMYARD MANURE.

Farmyard manure is a bulky substance, one ton containing :

Water	1,562.0 lbs.
Undigested matter, etc.....	414.0 "
Nitrogen.....	9.6 "
Potash	9.6 "
Phosphoric acid	4.8 "
	2,000.0 lbs.

It thus has only 24 lbs. of deficient plant food. It is evident, therefore, that 100 lbs. of any good commercial fertilizer will contain as much nitrogen, phosphoric acid, and potash as is found in 2,000 lbs. of manure.

A considerable part of the value of the excrement of an animal is in the liquid manure in the form of urea, a substance containing nitrogen, and which by fermentation changes into ammonia, and is lost, or may be if no precautions are taken. This being true the safest way would seem to be to get the manure, both solid and liquid, into the soil before fermentation takes place. This may be accomplished by drawing and spreading the manure as fast as it accumulates, whether in summer or winter. In many places this is practiced, but the deep snows of a New Hampshire winter prevent this generally; it is also true that on steep hillsides the plant food would be washed away to a certain extent, but on level land or land of moderate slope I should never hesitate to spread manure at any time when I could conveniently draw it to the field, whether in the fall, winter, spring, or summer. It is sometimes urged that manure loses nitrogen by exposure to wind and snow, but if manure is drawn out before fermentation commences there is little or no ammonia in it, and as the nitrogen of manure to be volatile must be in the form of ammonia, the loss from this source must be very small indeed. Manure spread on the surface in summer or early fall should be harrowed in, for the reason that if left on the surface it dries in hard lumps and is hard to break up and mix with the soil. Manure applied in the late fall, before or after the freezing of the soil, is probably in the best position possible, and I am satisfied, not only from general observation and the experience of the most observing farmers, but from experiments in which the exact weight of products has been determined, that if all the farmyard manure could be applied in November instead of April the average yield would be

increased by more than ten per cent from this change alone.

The explanation of this is to be found in the even distribution of the plant food in the surface soil. The fall rains and the melting snow soften the manure and dissolve the available plant food, washing it into the soil, where it is left in the best condition possible for the young plant.

The following experiments made on the experiment station farm show the effects of manure applied in this way:

Three acres of land were set apart for the work; the strips were fifty-six rods long and three rods wide. Each acre was divided into four sections, and each section consisted of three rows of corn, space being left between. These spaces were planted but not included in the experiment. The three rows had eight hundred hills, the hills and rows being three feet two inches apart; this would give three fourths of an acre in each set of four sections. The fifth acre had six cords of manure plowed in in the fall, the sixth acre had six cords spread on the surface in the fall, and the seventh had six cords spread on the surface in the spring. The yield was as follows: *

	Sound corn. lbs.	Soft corn. lbs.	Fodder. lbs.
Fifth acre, plowed in in fall	2,690	935	5,555
Sixth acre, on surface in fall	3,070	754	6,066
Seventh acre, on surface in spring	1,690	1,084	5,271

The manure was in all respects the same, so far as it is possible to get manure of like quality.

If manure is to be stored and all applied at one time, either in the spring or fall, it should be kept under cover, the heaps well leveled down and hogs kept on it. In this

* These yields are only for three-fourths of an acre.

way it is packed solid and the air largely excluded. This prevents fermentation to a large extent, and thus preserves the nitrogen. It is well known that sheep manure, so long as it lays in the pen, is packed so solid that no fermentation takes place, but as soon as thrown into a pile it quickly "heats" and gives off strong gases. This is caused by the access of the air; the same is true of all manures.

A liberal use of absorbents is always to be recommended, and when available there is nothing better than sawdust; not that the sawdust in itself contains much that is useful, but it readily takes up the liquids, and makes the manure easy to spread. Muck when well dried is a valuable absorbent. Straw and meadow hay are much used, but unless of very poor quality they can be put to better use.

As a general rule manure should not be plowed in deep. More manure is lost by burying too deeply than by exposure to the air, and if it were possible to mix evenly the whole of the manure with the first three inches of the surface soil, it would be in the best possible position for the ordinary crops. Every rain tends to carry the nitrogen, phosphoric acid, and potash down into the soil, and the action of the air near the surface tends to render available the unavailable parts of the manure, but if deeply plowed in, this decomposition is slow and often unsatisfactory.

As a general average all plants take up three times as much potash as phosphoric acid, while the prepared fertilizers on our markets just about reverse that rule by putting in three times as much phosphoric acid as potash; hence in using these goods we are obliged to use nine times as much phosphoric acid as the plant can use to get the required amount of potash.

Thus far we have been dealing with the chemical side of the question, and we naturally ask if there is any way in which this can be practically settled.

The answer must be, field experiments! and the method

must be based upon the use of fertilizing materials which contain the three forms of deficient plant food in separate substances, so that we may test them singly and in a variety of combinations having nitrogen, phosphoric acid, and potash in varying proportions. These tests, when well conducted and when properly duplicated and made by the side of plots having no fertilizer, are capable of giving a great deal of practical information.

PLAN OF EXPERIMENT FIELD.

Plots. (15 rods.)		Fourth acre. (10 rods.)	Third acre. (10 rods.)	Second acre. (10 rods.)	First acre. (10 rods.)
14 15 16 17 18 19 20 21 22 23 24 25 26	31 32 11 10 9 8 7 6 5 4 3 2 1	No manure; 346 lbs. bone. black; 150 lbs. muriate of potash; 56 lbs. sulphate of ammonia; cost, $11; 352 lbs. sown broadcast, and 200 lbs. put in hill; 3 applications.	13 loads of manure plowed in; 9 loads harrowed in; no fertilizer in hill; value, $33.	S E W N	(16 rods.)

These tests have been carried on here on the station farm for four years, on a series of plots twenty-four in number. The plan of experiment has been as follows: Plots of one twentieth of an acre were laid out according to the plan above. This was done in 1885. Each plot was separated from the adjoining ones by a vacant space three feet wide. Each plot, except those marked nothing, has received $8 worth of fertilizer yearly per acre for three years, 1885, 1886, 1887, or $24 in all. The table on page 120 shows the actual amount of each material used on each plot. The crops were corn, oats, and hay. With the corn the fertilizer was applied two thirds broadcast and one third in the hill, and the whole broadcast on the oats.

The table is computed to yields per acre, and as the second year's crop of corn was not recorded, I have assumed that it was the same as the first. That part of the table showing value of crops is on the basis of corn, 60 cents per 80 pounds as husked; soft corn, 10 cents per bushel of 34 pounds; fodder, $6 per ton; oats, 50 cents per bushel; straw, $6 per ton, and hay, $10 per ton. The column marked "value of crops for four years," adds the first year's crop in twice, which is not far from right. This is done to facilitate comparison with the third and fourth acres given later in this bulletin. The columns showing "composition of fertilizers" give the per cent of nitrogen, phosphoric acid, and potash, in each mixture. In plot 22 sulphate of potash was used the second year and the percentage is figured on the three applications. This is not strictly accurate, for the first crop had no potash at all, and the other crops were greatly benefited by the application, as the yield will readily show. Had potash been added the first year, the crop would have been considerably larger.

At the bottom of the page the average of the plots with no fertilizer is given.

Plots 2, 3, 11, and 12 only received fertilizers the first two years, consequently they cannot be compared with the others except for the first year's corn crop.

Plot 22 had two applications of bone, one in 1885, the other in 1887, and in 1886 an application of sulphate of potash was made.

TABLE.

No. of plot.	Dissolved bone-black.	Muriate of potash.	Sulphate of ammonia.	Ground bone.	Undissolved bone-black.	Krugit.	Dissolved South Carolina rock.	Undissolved South Carolina rock.	Ashes.	Bay State superphosphate.	Buffalo fertilizer.	Stockbridge corn.	Bowker hill and drill.	Yield per acre. 1885. Sound corn.	Yield per acre. 1885. Soft corn.	Yield per acre. 1885. Fodder.	Yield per acre. 1887. Oats.	Yield per acre. 1887. Straw.	Yield per acre. 1888. Hay.	Value of crops. 1885. Corn.	Value of crops. 1887. Oats.	Value of crops. 1888. Hay.	Value of crops. Total of three crops.	Total value of four-years' crop, 2d year estimated.	Per cent of composition of fertilizer used. Nitrog'n.	Per cent of composition of fertilizer used. Phosph. acid.	Per cent of composition of fertilizer used. Potash.	No. of plot.
									bu.					bu.	bu.	lbs.	bu.	lbs.	lbs.	$	$	$	$	$				
1	....	9	5	....	....	....	....	....	....	....	....	....	....	96½	39¼	7,590	42½	3,300	3,000	55.64	31.15	15.00	101.79	157.43	7	...	32	1
2	....	....	....	....	....	....	....	....	....	20	....	....	....	83	27	5,980	44½	2,900	2,650	45.54	....	....	.....	.....	3	12	2	2
3	....	....	....	....	....	....	....	....	....	....	20	....	....	76	27⅔	4,140	44½	3,000	3,550	37.98	....	....	.....	.....	3	12	2	3
4	....	....	....	....	....	....	....	....	....	....	....	20	....	101¾	21	5,290	53	3,400	3,050	48.49	36.70	15.25	100.44	148.93	3	12	6	4
5	....	....	....	....	....	....	....	....	....	....	....	...	20	85	18⅔	4,255	45	3,100	3,800	40.12	31.80	19.00	90.92	131.04	3	12	2	5
*6	....	....	....	....	....	....	....	....	....	....	....	....	....	51¼	28	3,590	41	3,000	3,600	....	....	....	.....	.....	....	....	....	6
7	17	¾	4	....	1½	....	..	....	....	....	....	....	....	80½	28½	4,600	45	3,600	3,000	40.80	33.30	15 00	89.10	129.90	3	12	2	7
8	13	9	....	....	....	....	....	....	....	..	....	....	....	101½	38½	6,219	53	4,000	4,000	52.93	38.50	20.00	111.43	164.36	....	9	20½	8
9	13	....	5	....	....	....	....	....	....	....	....	....	....	16	23	2,415	40½	3,300	2,500	14.34	30.15	12.50	56.99	71.33	5½	16	...	9
10	13	4½	2½	....	....	..	....	....	....	....	....	....	....	95	35¾	6,095	46	3,700	3,900	50.35	34.10	19.50	103.95	138.05	2½	9½	11¼	10
11	....	....	....	....	....	....	....	....	....	..	20	....	....	80¾	23⅔	3,910	39	2,600	3,670	38.31	....	....	.....	.....	3	12	2	11
12	....	....	....	....	....	....	....	....	....	20	....	....	....	71½	20	3,910	37	3,200	3,700	35.18	....	.. ..	.....	.....	3	12	2	12
15	....	....	....	....	....	....	..	....	1½	....	....	....	....	105½	34	5,250	40	3,600	5,270	50.79	30.80	26.35	107 94	158.73	....	2	8	15
*16	....	....	....	....	....	....	....	....	....	....	....	....	....	60	31	3,875	34½	2,600	4,050	....	....	....	.....	.....	....	....		16
17	....	..	....	....	....	40	.. ..	....	....	....	....	....	....	78¾	52⅓	6,250	38	3,900	5,650	47.60	30.70	28.25	106 55	154.15	...	..	8	17
18	....	17	....	....	....	....	....	....	....	....	....	....	....	33	52	4,750	38	3,700	4,700	29.35	30.10	23.50	82.94	112.29	...	...	50	18
*19	....	....	....	....	..	....	....	....	....	....	....	....	....	26	25	2,250	31	3,100	3,550		....	....	.....	.....	....	....	..	19
20	....	....	....	....	....	....	32	....	....	..	....	....	....	41½	29	2,625	41	3,140	3,000	23.22	29.92	15.00	68.14	91.36	....	16	....	20
21	....	....	....	....	....	....	....	36	....	....	....	....	....	65	30	4,000	45	3,140	3,950	34.50	31.92	19.75	86.15	120.65	....	34	..	21
22	....	....	....	*20	....	....	....	....	....	....	....	....	....	65	27	4,000	43	3,100	4,950	34.20	30.80	24.75	89.75	123.95	2	19	10	22
23	....	....	....	....	23	..	....	....	....	....	....	....	....	40⅓	30	3,125	33	3,200	3,550	24.47	26.10	17.75	68.32	92.79	....	31	....	23
*24	....	....	....	....	....	....	....	....	....	....	....	....	....	51½	25	3,375	27	3,100	3,200	....	....	....	.....	.....	....	....	..	24
25	27	....	....	....	....	....	....	....	....	....	....	....	....	45½	25¾	3,500	36	3,700	3,250	26.63	29.10	16.25	72.00	98.65	...	15	...	25
26	6½	9	2½	....	....	....	....	....	....	....	....	....	....	117	32⅓	7,500	40	4,200	3,950	60.83	32.60	19.75	113.18	174.01	2½	5¾	25	26
†	....	....	....	....	....	....	....	....	....	....	....	....	....	47½	27¼	3,246	33⅓	2,900	3,600	26.70	25 37	18.00	70.07	96.77	....	....	....	...

*Nothing. † Average of nothing plots.

This table may be studied from different standpoints. For the present I shall try to show what it teaches concerning the best combination of fertilizing materials for the crops and soil involved in this experiment.

VALUE OF CROPS FROM PLOT EXPERIMENTS.

No. of plot.	1885. Corn.	No. of plot.	1887. Oats.	No. of plot.	1888. Hay.	No. of plot.	Total of three lots.	Relative position.
26	$60.83	8	$38.50	17	$28.25	26	$113.18	1
1	55.64	4	36.70	15	26.35	8	111.43	2
8	52.93	10	34.10	22	24.75	15	107.94	3
15	50.79	7	33.30	18	23.50	17	106.55	4
10	50.35	26	32.60	8	20.00	10	103.95	5
4	48.49	21	31.92	21	19.75	1	101.79	6
17	47.60	5	31.80	26	19.75	4	100.44	7
2	45.54	1	31.15	10	19.50	5	90.92	8
7	40.80	15	30.80	5	19.00	22	89.75	9
5	40.12	22	30.80	23	17.75	7	89.10	10
11	38.31	17	30.70	9	12.50	21	86.15	11
3	37.98	.....	.....	.....	.....	.....	.....	12
12	35.18	.....	.....	.....	.....	.....	.....	13
21	34.50	.....	.....	.....	.....	.....	.....	14
22	34.20	.....	.....	.....	.....	.....	.....	15
18	29.35	9	30.15	4	15.25	18	82.94	16
25	26.25	18	30.10	1	15.00	25	72.00	17
23	24.47	25	29.92	7	15.00	23	68.32	18
20	23.22	20	29.10	20	15.00	20	68.14	19
9	14.34	23	26.10	9	12.50	9	56.99	20
Plots with no fertilizers.	26.70	.....	25.37	.....	18.00	.....	70.07	.....

The results tabulated on page 120 I have rearranged as above, commencing with the greatest value of crops for each year and following down to the lowest ; also for the total of three years. The last column shows the position as regards the best yield. The omission of oats and hay for the 12th, 13th, 14th, and 15th places is occasioned by the fact that no fertilizer was applied to plots 2, 3, 11, and 12 after the second year.

POTASH COMPARED WITH PHOSPHORIC ACID.

Plots 17 and 18 had only materials containing potash.

Plot 15 had ashes, a fertilizer containing but little aside from potash.

Plots 20, 21, 23, and 27 had phosphoric acid in various forms.

Plots 4 and 5 had prepared fertilizers.

Plot 8 had no nitrogen.

Plot 9 had no potash.

Plot 1 had no phosphoric acid.

Plots 10 and 26 had complete chemicals, while plots 6, 16, 19, and 24 had no fertilizers of any kind.

The following table gives the average results from these groups; the fifth column being obtained by adding the three crops to an assumed crop for the second year equaling first year. The sixth column shows the gain in four years, due to $24 worth of fertilizer, each application being $8 per acre.

VALUE OF CROPS PER ACRE FROM PLOTS FERTILIZED IN VARIOUS WAYS.

	Plots.	Corn.	Oats.	Hay.	Total three years.	Total 4 years, estimating 2d year's crop like 1st.	Value increase of crop over plots receiving no fertilizers.	Value of increase of crop for $1 of fertilizer used.
Average from potash alone	17, 18	$38.47	$30.40	$25.87	$94.74	$133.21	$36.44	$1.52
Nothing	6, 16, 19, 24	26.70	25.37	18.00	70.07	96.77	.....	.....
Phosphoric acid alone	20, 21, 23, 27	27.21	29.26	17.19	73.66	100.87	4.10	.17
Phosphoric acid and potash	8	52.93	38.50	20.00	111.43	164.36	67.59	2.81
Phosphoric acid and nitrogen	9	14.34	30.15	12.50	56.99	71.33	loss.	.....
Phosphoric acid, potash, and nitrogen	10	50.35	34.10	19.50	103.95	154.30	57.53	2.39
Prepared or commercial fertilizers	4, 5	44.30	34.25	17.12	95.67	139.97	43.20	1.80
Complete chemicals	10, 26	55.59	33.35	19.62	108.56	164.15	67.38	2.80
Potash and nitrogen	1	55.64	31.15	15.00	101.79	157.43	60.66	2.51
Ashes	15	50.79	30.80	26.35	107.94	158.73	61.96	2.50

Phosphoric acid alone gives practically no increase of crop over unmanured plots. Potash alone gives a substantial increase, holding out well, as is shown by the value of the last crop. Ashes, with one exception, prove to be the most economical fertilizer, thus showing the effect of potash in another form.

Plots 1, 8, 9, and 10 constitute a series which was planned to show the effect of various combinations in which the nitrogen, phosphoric acid, and potash are combined in various ways. Plot 1 gives us a total for four crops of $157.43; this plot had no phosphoric acid added, and yet the results are well up to those obtained when phosphoric acid was used Plot 8 omitted nitrogen, but the aggregate value of the four crops stands at the head. In plot 9 potash was omitted, and it stands at the foot, being considerably below the plots that received nothing; this may be accounted for by supposing that the sulphate of ammonia used was too strong for the seeds, thus preventing germination. Here we have good evidence that the omission of nitrogen in no way interferes with the yield, and if the details of crop on plot 8 are looked at it will be seen that the yield holds out well in the series of crops.

Omission of phosphoric acid does not seriously cut down the yield during the first three years, but in grass there is a marked falling off; but when potash is omitted the crops fall to the lowest point. Plot 10 has a complete mixture, and if we compare it with plot 8 it will be seen that one half of the muriate of potash in plot 8 is exchanged for an equal cost of sulphate of ammonia in plot 10; the yield in plot 10 is good, but falls below plot 8 by $10.06 in four crops. From what has been said it is evident that potash stands first, phosphoric acid second, and nitrogen last. In fact we should use nitrogen but sparingly, and only when direct experimental work proves it to be profitable.

Returning to table on page 120 we will study the best

six yields of each crop. Plot 8 appears in all of these; plot 15 appears in corn and hay; plot 26 appears in corn at the very head of the column, and it is fifth in oats and seventh in hay, but in the column of total values of three years' crops plot 26 leads, with plot 8 next, etc.

The following table shows the average per cent of nitrogen, phosphoric acid, and potash in the fertilizers which produce the six highest yields of each crop, and of the aggregate of the three crops, also of the four best yields of each crop and of the sum of the three crops:

	Best six yields.				Best four yields.			
	Corn.	Oats.	Hay.	Sum of the three.	Corn.	Oats.	Hay.	Sum of the three.
	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.
Nitrogen	2.5	1.80	.3	2.00	2.40	2.5	.5	.60
Phosphoric acid	6.4	13.71	10.7	4.37	4.19	10.6	5.2	4.19
Potash	15.5	10.80	16.1	17.46	21.40	10.0	19.0	15.40

The composition of the fertilizer producing the best yield with each crop is shown below:

	Nitrogen.	Phosphoric acid.	Potash.
Corn	2.5	5.75	25.0
Oats	.....	9.00	20.5
Hay	.....	.....	8.0
Sum of these	2.5	5.75	25.0

These results, almost without exception, seem to warrant the conclusion already expressed that potash and not phosphoric acid is the controlling factor. Experiments made in other parts of the State, on soils differing greatly from the Connecticut river land, show even more marked results.

The following diagram represents the value of the crops produced by each kind of fertilizer, in graphical form, one inch of line representing $40:

No fertilizer, $70.07.

Potash alone, $94.74.

Phosphoric acid alone, $73.66.

Phosphoric acid and potash, $111.43.

Phosphoric acid and nitrogen, $56.99.

Phosphoric acid, potash, and nitrogen, $103.95.

Prepared fertilizers, $95.67.

Complete chemicals, $108.56.

Potash and nitrogen, $101.79.

Ashes, $107.94.

SCALE, 1-8 inch equals $5.00.

VALUE OF NITROGEN FROM DIFFERENT SOURCES.

The three-acre experiment was planned primarily to test manure applied in spring and fall, but each acre was

divided into four sections, and these were fertilized as follows :

5th acre,	Section 1. 800 hills,	Dissolved bone-black.....25 Krugit.....33 Sulphate of ammonia..... 5
	Section 2, 800 hills,	Dissolved bone-black.....25 Krugit.....33 Dried blood..... 8 1-2
	Section 3, 800 hills,	Dissolved bone-black.....25 Krugit.....33 Nitrate of soda..... 7
	Section 4, 800 hills,	Dissolved bone-black.....25 Krugit.....33 Sulphate of potash.....10
6th acre.	Section 1,′ 800 hills,	Dissolved bone-black.....25 Krugit.....33 Sulphate of potash.....10
	Section 2,′ 800 hills,	Dissolved bone-black.....25 Krugit.....33 Nitrate of soda..... 7
	Section 3,′ 800 hills,	Dissolved bone-black.....25 Krugit.....33 Dried blood..... 8 1-2
	Section 4,′ 800 hills,	Dissolved bone-black.....25 Krugit.....33 Sulphate of ammonia... 5
7th acre,	Section 1,″ 800 hills,	Dissolved bone-black.....25 Krugit.....33 Sulphate of ammonia..... 5
	Section 2,″ 800 hills,	Dissolved bone-black.....25 Krugit.....33 Dried blood..... 8 1-2
	Section 3,″ 800 hills,	Dissolved bone-black.....25 Krugit.....33 Nitrate of soda..... 7
	Section 4,″ 800 hills,	Dissolved bone-black.....25 Krugit.....33 Sulphate of potash.....10

In each case one half was sown broadcast and one half in the hill. It will be seen that each acre had one section of each kind; and so if all the sections having sulphate of ammonia, for example, were added together and compared with the sum of all that had nitrate of soda, the difference in the method of manuring the three acres would be overcome and not affect the comparative results.

YIELD PER SECTION OF THREE ACRES.

		Sound corn.	Soft corn.	Fodder.	Source of nitrogen.
		lbs.	lbs.	lbs.	
5th acre.	Section 1	700	270	1,460	Sulphate of ammonia.
	" 2.....	740	190	1,500	Dried blood.
	" 3.....	670	240	1,390	Nitrate of soda.
	" 4.....	580	235	1,265	Potash instead of nitrogen.
6th acre.	Section 1′.....	735	230	1,465	Potash instead of nitrogen.
	" 2′.....	745	250	1,645	Nitrate of soda.
	" 3′.....	800	154	1,4 6	Dried blood.
	" 4′.....	790	120	1,460	Sulphate of ammonia.
7th acre,	Section 1″.....	480	350	1,575	Sulphate of ammonia.
	" 2″.....	450	280	1,360	Dried blood.
	" 3″.....	400	202	1,118	Nitrate of soda.
	" 4″....	360	252	1,218	Potash instead of nitrogen.

The following rearrangement of these results shows the effect of the different sources of nitrogen and also of a fertilizer containing no nitrogen:

NITROGEN FURNISHED IN SULPHATE OF AMMONIA.

	Sound corn.	Soft corn.	Fodder.
	lbs.	lbs.	lbs.
Section 1.....	700	270	1,461
" 4′.....	790	120	1,460
" 1″.....	480	350	1,575
Total per 2,400 hills.....	1,970	740	4,496

NITROGEN FURNISHED IN DRIED BLOOD.

	Sound corn.	Soft corn.	Fodder.
	lbs.	lbs.	lbs.
Section 2	740	190	1,560
" 3′	800	154	1,496
" 2″	450	280	1,360
Total per 2,400 hills	1,990	624	4,356

NITROGEN FURNISHED IN NITRATE OF SODA.

	Sound corn.	Soft corn.	Fodder.
	lbs.	lbs.	lbs.
Section 3	670	240	1,390
" 2′	745	250	1,645
" 4″	400	202	1,118
Total per 2,400 hills	1,815	692	4,153

FERTILIZER CONTAINING NO NITROGEN.

	Sound corn.	Soft corn.	Fodder.
	lbs.	lbs.	lbs.
Section 4	580	235	1,205
" 1′	735	230	1,565
" 4″	360	252	1,218
Total per 2,400 hills	1,675	717	3,888

SUMMARY.

	Sound corn.	Soft corn.	Fodder.
	lbs.	lbs.	lbs.
Sulphate of ammonia	1,970	40	4,496
Dried blood	1,990	624	4,356
Nitrate of soda	1,815	692	4,153
No nitrogen	1,675	717	3,888

There seems to be very little choice between the three forms of nitrogen used, but it does appear in this case that nitrogen increased the crop.

MANURES VERSUS CHEMICALS.

One of the questions frequently asked is this: "Can chemical fertilizers compete with farmyard manures?" This question is a very important one to those who are selling hay, as well as to farmers in the vicinity of villages and cities, where farmyard manure is available. For the past four years an experiment has been carried on which has given very satisfactory results, no accident happening to either of the areas under cultivation.

Two acres of land, from a field of six acres, were selected for this experiment. The land had produced hay for three years previous to 1885; oats and sugar-beets had preceded the hay. The plan on page 118 shows the arrangement of the six-acre field; the third and fourth acres are the ones to be considered.

The third acre had 13 loads of manure plowed in and 9 loads harrowed in, or in cords this would be 5.6 cords plowed in and 3.8 cords on surface, or 9.4 cords in all, which would sell, as it lay under the stables, for $33. This manure was from fattening steers, well fed with hay, straw, cottonseed, and corn meal. The fourth acre had yearly applications of chemical fertilizers, mixed as follows:

Dissolved bone-black	346 lbs
Muriate of potash	150 "
Sulphate of ammonia	55 "

The average cost of this mixture has been $11, and as there have been three applications since 1885, it follows that each acre has received $33 worth of fertilizer; the third having $33 worth of manure, and the fourth $33 worth of chemicals. The first year the crop was corn, the second year corn, the third oats, and the fourth grass.

The following table shows the yield of each acre for each year, and also the value of the crop, assuming 80 pounds of corn as harvested to be worth 60 cents, 34

pounds of soft corn 10 cents, and fodder 30 cents per hundred, oats 50 cents per bushel, straw 30 cents per hundred, and hay $10 per ton:

		Third acre, — manure.		Fourth acre, — chemicals.		Total yield with manure.	Total yield with chemicals.
		1885.	1886.	1885.	1886.		
Corn	Sound *	112 bu.	83¾ bu.	97 bu.	82¾ bu.	195¾ bu.	179¾ bu.
	Soft	16½ bu.	27 bu.	15 bu.	24 bu.	43½ bu.	39 bu.
	Fodder	4,835 lbs.	4,435 lbs.	5,352 lbs.	4,927 lbs.	9,270 lbs.	10,279 lbs.
	Value	$49.75	$41.12	$46.65	$42.00	$90.87	$88.65
		1887.					
Oats	Grain †	43 bu.		47½ bu.			
	Straw	4,535 lbs.		5,267 lbs.			
	Value	$35.10		$39.55		$35.10	$39.55
		1888.					
Hay	Yield	5,880 lbs.		6,202 lbs.			
	Value	$29.40		$31.01		$39.40	$31.01
Total crop for four years						$155.37	$159.21
Excess of value for chemicals						3.84	

* Sound corn, 40 lbs. per bushel; soft corn, 34 lbs. per bushel.
† Oats, 32 lbs. per bushel.

The cost of applying the manure was $2.80, and for the three applications of chemicals $1.44.

This experiment has been carried out with the expectation of continuing it for two or three years more with grass, after which the same fertilizer should be repeated.

It will be seen from the plan of the field on page 118 that the plot experiments were immediately adjoining the fourth acre, and from the table on page 120 the following yields from plots 6, 16, 19, and 24 are obtained as the natural capacity of the soil, no fertilizer of any kind being used on them: corn, sound, 47¼ bushels, soft, 27¼ bushels, fodder, 3,246 lbs.; oats, 33⅓ bushels; straw, 2,900 lbs.;

hay, 3,600 lbs. From these figures it will be seen that the value of the corn crop was $26.70; the oats, $25.37; hay, $18.

The individual yield of the plots in 1886 was not determined, but I have assumed that it was the same as the previous year, though it was probably somewhat less. The total value of the four crops where no manure or fertilizer was used would be $96.77; hence the gain due to manure has been $58.71, while the chemicals have given a gain valued at $62.55.

There is one point which was very clearly demonstrated in this experiment, namely, the effect of fertilizers upon the kind of vegetation. Each acre was seeded with mixed seed, herd's-grass, redtop, and alsike clover, the seed was mixed alike, sown alike and at the same time, harrowed the same, and treated in all respects in the same way, but throughout the growing season the line between the two acres was marked by the abundance of clover on the acre where chemicals were used and the absence of clover where the manure was used. This line was so well marked that when the grass was cut it was possible to divide the two acres by the line where the clover ended. In another field, where nothing but chemicals has been used for five years, and where a part of the field was dressed with a mixture unusually rich in potash, the same circumstance has been observed for two years, the exact line being plainly indicated by the clover on the potash side and the absence of clover on the other. The plot experiments show this more forcibly than the cases already mentioned, and in the following table I have given the number of the plot, the per cent of nitrogen, phosphoric acid, and potash in the fertilizer, and in the next three columns the relative per cent of herd's-grass, clovers, and redtop in the hay when harvested. These proportions are of course estimated, but it was done when the grass was partially dry, and must be very close to the true

ratio. It will be noticed that the amount of clover follows very closely the per cent of potash in the fertilizer, and as the seed sown was exactly alike on each plot there is no escape from the conclusion that potash promotes the growth of clovers.

	Composition of fertilizer.			Per cent of each variety of grass.		
	Nitrogen.	Phosphoric acid.	Potash.	Clover.	Herd's-grass.	Redtop.
Plot 1	7	.....	32	10	70	20
" 2	3	12	2	.....	20	80
" 3	3	12	2	.....	15	85
" 4	3	12	6	1	19	80
" 5	3	12	2	1	19	80
" 6	.....	.....	.....	1	19	80
" 7	3	12	2	2	23	75
" 8	.....	9	20.5	55	40	5
" 9	5.5	16	.....	5	85	10
" 10	2.5	9.5	11.25	10	80	10
" 11	3	12	2	2	58	40
" 12	3	12	2	2	48	50
" 15	.....	2	8	35	60	5
" 16	.....	.....	.....	2	48	50
" 17	.....	.....	8	35	55	10
" 18	.....	.....	50	40	55	5
" 19	.....	.....	.....	1	24	75
" 20	.....	16	.....	1	19	80
" 21	.....	34	.....	1	19	80
" 22	2	19	10	20	60	20
" 23	.....	34	.....	1	19	80
" 24	.....	.....	.....	.....	15	85
" 25	.....	15	.....	1	14	85
" 26	2.5	5.75	25	35	60	5

This is an important fact, for it is well known that clover stores up nitrogen in the surface soil, its long, deep roots gathering the costly element from the sub-soil and bringing it up within the reach of the cereals or other crops; thus by the use of combinations containing a large per cent of potash we are able indirectly, through the growth of clover, to increase the available nitrogen in our surface soils.

So far as results have been obtained we are justified in saying that chemicals, rightly proportioned, can be used as a complete substitute for farmyard manure; that they

will produce as great a value of crop, dollar for dollar, as manure; and that they improve the quality of the hay by increasing the clover, and, indirectly, the supply of available nitrogen is increased.

I am thoroughly convinced that our fertilizer manufacturers must give us in New Hampshire more than four per cent of potash, and from other New England States I am receiving letters that convince me that New England as a whole would be benefited by ten per cent of potash in the fertilizers used; and were I to buy a prepared fertilizer to-day for our general crops I would get some one of the so-called "special potato fertilizers," since they have more potash than any others on the market.

My advice to farmers is to buy dissolved bone-black containing sixteen per cent of soluble phosphoric acid, muriate of potash containing fifty per cent of actual potash, and sulphate of ammonia containing twenty per cent of nitrogen, and from these crude materials mix such combinations as are best suited to the soil and crops under cultivation. These materials may be obtained from any fertilizer manufacturer, they are in forms that are ready for use, there is nothing to do but to mix the required amounts exactly as one would mix corn meal, shorts, and cottonseed together for feeding. It is no more labor, nor is there any danger. Every farmer can experiment for himself if he buys his deficient plant food in these separate substances, for he is at liberty to mix them in any proportion that he pleases, and in time it would be possible for each to supply those elements which the soil most needed and to withhold those not specially required. There certainly can be no loss, for in any event the crude chemicals will be as cheap as the manufactured goods.

The following combinations can be used to good advantage, and have all been tested and found well adapted to our conditions in New Hampshire. Each combination is

for one acre, and in no case should more than 150 pounds be put in the hill, the remainder being sown broadcast.

I. — CHEMICALS FOR CORN AND WHEAT.

	lbs.
Dissolved bone-black	325
Muriate of potash	100
Sulphate of ammonia	75
	500

II. — CORN (SAME AS PLOT 26 IN EXPERIMENTS).

	lbs.
Dissolved bone-black	182
Muriate of potash	252
Sulphate of ammonia	66
	500

III. — CORN (AVERAGE OF FOUR BEST YIELDS IN PLOTS).

	lbs.
Dissolved bone-black	175
Muriate of potash	250
Sulphate of ammonia	75
	500

IV. — ENSILAGE.

	lbs.
Dissolved bone-black	250
Muriate of potash	200
Sulphate of ammonia	50
	500

V. — OATS (AVERAGE OF BEST FOUR PLOTS IN EXPERIMENTS).

	lbs.
Dissolved bone-black	330
Muriate of potash	105
Sulphate of ammonia	65
	500

VI. — OATS (LIKE THE BEST PLOT IN EXPERIMENT NO. 8).

	lbs.
Dissolved bone-black	300
Muriate of potash	200
	500

VII. — HAY (AVERAGE OF FOUR BEST CROPS).

	lbs.
Dissolved bone-black	225
Muriate of potash	254
Sulphate of ammonia	21
	500

VIII. — HAY.

	lbs.
Dissolved bone-black	700
Muriate of potash	200
Sulphate of ammonia	50
	950

IX. — POTATOES.

	lbs.
Dissolved bone-black	340
Muriate of potash	160
	500

X. — POTATOES.

	lbs.
Dissolved bone-black	300
Muriate of potash	150
Sulphate of ammonia	50
	500

It will be observed that these combinations contain a considerable quantity of muriate of potash, and it must be borne in mind that if seed comes in direct contact with it there is great danger of the root being injured if not wholly destroyed. For this reason I would especially recommend that a large part of the fertilizer be used broadcast. The amounts above given are for one acre when no manure is to be used. For corn and potatoes I would never put more than 150 pounds in or on the hills or drills, and I would first plant and cover the seed as though no fertilizer was to be used, and immediately after would apply the 150 pounds on the top of the hill or drill, leaving it there to be washed down into the soil by the rains. There is little if any loss in this method, and I

believe the results will be better than from putting the fertilizer in the hill.

To mix these weigh or measure out the required amount (see table of weights, bulletin 5), sweep a place on the barn floor and put down the separate substances, then shovel the mixture over until well combined. It is then ready for use. None of the substances are volatile, hence there is no loss by standing.

Bulletin No. 7. — Test of Dairy Apparatus.

The following bulletin gives the details of a test of different kinds of creaming apparatus. The rules were agreed upon by the president and secretary of the State Dairymen's Association, the secretary of the State Board of Agriculture, and the director of the Experiment Station.

RULES GOVERNING TEST.

At the farmers' institute, to be held by the New Hampshire Board of Agriculture, Granite State Dairymen's Association, and New Hampshire Agricultural Experiment Station, at Hanover, N. H., January 8, 9, and 10, 1889, the following tests will be made:

1. Comparative test of Moseley & Stoddard, Cooley, Johnson Top-can Separator, and the DeLaval Hand-power Separator; also any other apparatus, manufacturers of which may express a desire to enter in this test before January 1.

2. A test of churns, including Stoddard, Davis, and Blanchard, and any other which manufacturers may request to have tested; this request to be made before January 1.

RULES.

1. One representative of each system will be allowed to witness all operations, to see that each variety of apparatus is handled as it should be; the actual work, however, will be performed by men selected by the director of the Station, the secretary of the Board of Agriculture and the secretary of the Dairymen's Association.

2. Seventy-five pounds of milk will be used by each system Tuesday morning, January 8, and seventy-five pounds by each system Tuesday night; each test will, therefore, consist of 150 pounds of milk.

3. The cans used by each competing manufacturer shall be their usual cans, used in the common way; the hand-power separator shall be the DeLaval vertical, run at not less than forty nor more than forty-six turns a minute.

4. The temperature of the milk, which shall all be of the milking corresponding with the time of setting or separating, may be anywhere from 70° to 90° as each system may desire.

5. All milk will set twenty-four hours in water at any temperature desired, from 40° up, and the skimming will be by the surface skimmer of the Moseley & Stoddard and the bottom skimming device of the Cooley, and all others, in like manner, by their common advertised method. The milk will be run through the hand separator as soon as the whole milk is divided into three parts, a sufficient quantity of the skim-milk being poured back and run again to displace the cream in the bowl.

6. The "separated" cream will be held in ice water until Wednesday night, as will the first skimming from the deep setting; Wednesday night, when the last skimming is done, all the cream from each system will be warmed to 85° and will stand in the same rooms at a temperature as near 65° as possible; it will be regularly and equally stirred at such times as may be agreed upon until it is time to put it in the churn.

7. Churning will commence as near 8 A. M., Thursday, the 10th, as possible, and as each lot will be churned in the same churn, lots will be drawn to determine the order of churning. The temperature of the cream will be such as each representative of the respective systems shall decide upon within 58° to 68°, and the churning shall proceed at such rate of speed as is desired by each. The buttermilk shall be removed by washing, as far as is possible, and the butter, after being washed in the churn, shall hang in a cheese-cloth bag twenty minutes; it shall then be weighed, and for each pound one ounce of salt shall be added. It shall then be worked by some experienced butter-maker on a Skinner worker; said butter-maker shall not know the identity of the samples and shall work them as uniformly as he can. The salted butter shall then be weighed and samples be taken for analysis. Samples of milk, skim-milk, and buttermilk shall also be taken and analyzed.

8. The final award of merit shall rest upon the basis of the per cent of actual fat (as determined by analysis of the milk and the weight of the milk) that is recovered in the butter (also determined by analysis of the butter). To make this clear I will give an example. Suppose the milk to contain 4 per cent of fat; 150 lbs. $\times$ .04 $=$ 6 lbs. actual fat. Suppose this to make 6¼ lbs. of butter containing 80 per cent of fat; $6.25 \times .80 = 5$ lbs. of fat in butter; that is, out of six pounds of fat in the milk five have been recovered in the

butter, or $83\frac{1}{3}$ per cent of the total fat of the milk is found in the butter; this represents the efficieney of the system used. The quality of the butter from each system will also be determined by an expert.

The committee conducted these tests without mishap in any part of the work.

The Johnson top-can separator, a new device for raising cream by cold deep setting, was not in working shape, as only half the necessary number of cans were brought, and consequently one setting stood but nine hours and the other but thirteen and a half; this renders it impossible to compare the results of this system with the others. I have given the figures, however.

The work of mixing and dividing the milk was done with the greatest of care; the order of taking out the night's setting being the reverse of the morning's, so that all danger of getting richer milk at the top might be avoided, since the system that took the top milk in the morning took the bottom milk at night.

The centrifugal separator used was run by hand power, and of course did not skim as thoroughly as the larger machines that run by steam power.

Table I. gives the amount of milk, the temperature at which it was when set, the temperature of the water in which it was set, the time that elapsed before skimming, the spaces of cream and the weight of the same, the time required for churning, temperature of cream when churned, the amount of skim-milk and the fat in it as shown by analysis, the amount of buttermilk (this was determined by subtracting from the weight of cream the weight of the drained butter; this is the most accurate method, for it is impossible to draw off all the buttermilk and weigh it, as a portion will be left in the butter and must be worked or washed out), the per cent of fat in the buttermilk, the per cent of water, fat, and casein in the butter, the amount of butter, its quality as determined by experts who knew nothing of the identity of the samples, the efficiency of the systems, and the pounds of milk required per pound of butter.

TABLE I.

		MILK.					CREAM.				SKIM-MILK.		BUTTER MILK.		BUTTER.						
		Amount set.	Temperature of milk.	Temperature of water at time of setting.	Temperature of water when skimmed.	Time milk set.	Spaces.	Amount.	Time required to churn.	Temperature when churned.	Amount.	Per cent of fat.	Amount.	Per cent of fat.	Amount.	Per cent of fat.	Per cent of casein.	Per cent of water.	Quality, 100 being perfect.	Efficiency of system.	Milk required per pound of butter.
		lbs.	deg.	deg.	deg.	hrs.		lbs.	min.	deg.	lbs.		lbs.		lbs.	oz					lbs.
Moseley & Stoddard	1 A.M.	75	90	40	32	24	26	34	31	62½	57	.34 .28	27¾	2.17	6	½	80.89	.46	14.07	89	82.11	24.8
	1 P.M.	75	91	40	33	21	26½				58	.27 .32										
Cooley	2 A.M.	75	90	40	32	23½	21½	33¼	28	65	58¼	.29 .32	26½	3.29	5	14	81.25	.38	15.01	85	80.36	25.5
	2 P.M.	75	91	42	35	21½	21				57¾	.19										
Johnson top can	3 A.M.	48	90	40	32	9	....	21	17	65	36	.50 .48	17	5.53	3	5½	78.00	.66	16.40	86	.....	...
	3 P.M.	48	91	42	35	13½	....				38	.41 .43										
Shallow six-quart pan	4 A.M.	143¾	90	55	55	29¾	....	26¼	33	60	115¼	.... .32	20	1.07	6	4	82.32	.66	12.58	95	91.70	23.0
	4 P.M.			47	50							.37										
DeLaval hand separator	5 A.M.	75	87	.....	.....	17*	....	17½	22	61	65¾	.... .39 .46	11	.99	6	13	79.44	.49	14.02	86	91.10	22.0
	5 P.M.	75	87	.....	.....	17*	....				65	.26 .21										

* Time of separating, in minutes.

The committee of experts who examined the butter consisted of C. H. Waterhouse, president of the New England Creamers' Association, and H. W. Sadd, of Connecticut.

The butter was marked in the following scale for perfect butter: Flavor, 50; grain, 25; color, 15; salt, 10.

Table II. gives the full marking of each sample.

TABLE II.

	Perfect butter would mark.	Moseley & Stoddard.	Cooley.	Johnson top can.	Shallow six-quart pan.	DeLaval hand separator.
Flavor	50	40	43	50	45	41
Grain	25	25	20	18	25	25
Color	15	14	12	8	15	10
Salt	10	10	10	10	10	10
Total	100	89	85	86	95	86

The efficiency of the various systems is based upon the per cent of the total fat in the milk which is found in the butter (see rule 8 of "Rules of Test"); this was taken because it is the only true test. If one system gives a cream which churns less thoroughly than the cream given by another system, it is just as much to the discredit of the former as though the fat was left in the skim-milk; consequently if we are to arrive at a knowledge of the value of any given system we must follow the original fat in the milk through to the lump of butter, and find the per cent of this fat that is recovered.

The milk used in these tests was sampled and analyzed. Morning's milk had 3.93 per cent of fat, night's milk 3.99 per cent of fat.

The following table shows the amount of fat in the milk, the amount lost in the skim-milk and buttermilk, and the amount recovered in the butter:

TABLE III.

	Moseley & Stoddard.	Cooley.	Open pans.	Separator.
	lbs.	lbs.	lbs.	lbs.
Total fat in milk	5.9400	5.9400	5.6500	5.9400
Lost in skim-milk	.3246	.3094	.3976	.4315
Lost in buttermilk	.6020	.8718	.2140	.1089
Recovered in butter	4.8776	4.7734	5.1450	5.4118
	Per cent.	Per cent.	Per cent.	Per ct.
Total fat lost in skim-milk	5.47	5.21	7.03	7.26
Total fat lost in buttermilk	10.13	14.67	3.78	1.83
Total fat recovered in butter	82.11	80.36	91.07	91.10

TEST OF CHURNS.

There being a lack of time in which to make the churning tests, it was decided to have these carried on by the station employés, and the representatives of the Moseley & Stoddard and Blanchard churns consented to leave their goods for the work.

Mr. A. H. Wood, superintendent of dairy work, has carried out the following experiments, the chemical work being done by Mr. E. H. Farrington.

The cream for each test was kept in one vat and ripened, and then divided into three lots.

The cream for the first tried was held thirty hours and was sweet; the second trial was the same; but the third was warmed up to 70° and allowed to stand until it gradually fell to 55°, when it was again warmed, and in all stood thirty hours; it was slightly acid.

TABLE IV.

	DAVIS.			BLANCHARD.			STODDARD.		
	First trial.	Second trial.	Third trial.	First trial.	Second trial.	Third trial.	First trial.	Second trial.	Third trial.
Amount of cream, lbs...	42	47.4	39	42	47.4	39	42	47.4	39
Time of churning, min..	19½	28½	24½	44	53½	43½	24	32½	30½
Temperature of cream, deg	62	61	62½	62	61	62½	62	61	62½
Amt. salted butter, lbs..	13.00	14.81	12	13.34	15.69	12.09	12.75	15.09	12.69
Amount buttermilk, lbs.	27	31	26½	27	31	26½	27	31	26½
Per cent of fat in buttermilk	2.14	1.19	2.02	2.61	1.26	1.94	2.30	1.24	1.82
Per cent of fat in butter	.....	85.16	82.84	.....	79.07	82.70	.....	83.46	79.43
Total fat in butter, lbs..	.....	12.61	9.94	.....	12.41	10	.....	12.60	10.08
Total fat in buttermilk, lbs.	.....	.38	.53	.....	.40	.51	.....	.40	.48
Speed of churn, per min.	45	45	45	60	65	65	60	65	65

The table given above shows the details of each trial for each churn.

The butter from the first trial was not analyzed, but the buttermilk was, and as the thoroughness of churning is shown by the per cent of fat left in the buttermilk, the work is not injured by the absence of the butter analysis in this case.

The following table gives the per cent of fat in the buttermilk from each churn for each trial, and also the average of the three trials:

ANALYSIS OF BUTTERMILK.

	First trial.	Second trial.	Third trial.	Average.
Davis	2.14	1.19	2.02	1.78
Blanchard	2.61	1.26	1.94	1.93
Stoddard	2.30	1.24	1.82	1.78

In the three trials 128.4 pounds of cream were used by each system, with the following results :

Davis swing made..... 39.81 pounds of salted butter.
Blanchard made..... 41.12 pounds of salted butter.
Stoddard made..... 40.53 pounds of salted butter.

Taking the last two trials, where analyses of both butter and buttermilk were made, and we found that from 86.9 pounds of cream the

Davis made..... 26.81 pounds of salted butter.
Blanchard made..... 27.78 pounds of salted butter.
Stoddard made..... 27.78 pounds of salted butter.

From the analyses of the butter, we find that each of the foregoing amounts of butter had of actual butter fat the following :

Davis .....22.55 lbs. fat; lost in buttermilk, .91 lbs.
Blanchard..... 22.41 lbs. of fat; lost in buttermilk, .91 lbs.
Stoddard..... 22.68 lbs. of fat; lost in buttermilk, .88 lbs.

The total fat in both butter and buttermilk being :

Davis..... 23.46 lbs.; 96.1 per cent of this was in butter.
Blanchard.... 23.32 lbs.; 96.1 per cent of this was in butter.
Stoddard..... 23.56 lbs.; 96.2 per cent of this was in butter.

These results show that there is practically no difference in the efficiency of these three churns, and if there is any preference it must come from convenience in handling and ease of operation.

There was a good exhibit of butter from most of the creameries of the State, and samples were taken and analyzed at the state laboratory.

The following table gives the composition :

Name of Exhibitor.	No. of sample.	Per cent water.	Per cent fat.	Volatile acids = c. c. soda solution.	Casein.	Salt, etc., by difference.
Lyme creamery	A100	13.08	81.98	15.3	.756	4.18
Hanover creamery, 3d prize	A101	11.24	85.07	15.3	.544	3.15
Keene creamery, 2d prize	A102	11.33	84 39	15.2	.700	3.58
Cold Brook creamery, Franklin	A103	7.60	88.49	14.8	.576	3.33
Oyster River creamery, Durham	A104	9.19	85.74	15 5	.781	4.29
Island View creamery, Whitefield	A105	14.37	80.32	14.5	.560	4.75
Cornish creamery	A106	15.70	79.87	15.5	.960	3.47
Cold River creamery, Alstead	A107	8.51	87.86	14.6	.743	2.89
Piermont creamery	A108	13.22	81.21	15.8	.697	4.98
West Lebanon creamery, 1st prize	A109	12.69	82.15	15.4	.650	4.51
Short Falls creamery	A112	14.94	82.45	14.6	.706	1.91
Center Strafford creamery	A113	10.00	87.30	14.7	.377	2.32
Cold Brook creamery, print	A118	11.90	82.35	15.8	.669	5.18
Peterborough creamery	A119	12.26	83.77	15.3	.631	3.34
Grantham creamery	A121	9.41	86.26	14.7	.650	3.68
E. A. Perley, dairy, Lebanon	B102	12.15	85 40	15.0	.545	1.91
L. T. Hazen, dairy, Whitefield, 2d	B103	11.86	82.85	16.1	.925	4.37
J. L. Gerrish, dairy, Mast Yard	B104	8.08	85.19	15.1	.750	5.98
W. D. Baker, Quincy, 1st	B116	8.43	81.10	15 8	.669	2.80
N. H. Exp't Station, Hanover, 3d	B105	10 12	85.32	15.5	(?)	(?)
Averages		11.30	84.30	15.2	.678	3.66

The averages in the above table must closely correspond with the average of the best butter made in this State. For the sake of comparison I have collected data which give the following general average composition of many samples of butter : Water, 12.48 ; fat, 84.77 ; casein, .73 ; salt, etc., 2.02 ; volatile acids = to 14 c. c. standard soda solution.

The butter exhibited shows a large per cent of salt, but this is demanded by the customers as a general thing. The casein is low, but there is possibility of improvement here. We should try to produce butter in our creameries with not over .5 of one per cent of casein ; the per cent of water, too, should be reduced, and the fat correspondingly increased.

If I were to give a standard for creameries or private dairymen to work toward, it would be as follows: Water, 10 per cent; fat, 86 per cent; casein, .5; salt, 3.5. Fancy butter as a rule runs high in the per cent of fat, high in volatile acids, low in water and casein.

Bulletin No. 8. — Feeding Experiments.

This bulletin was issued at the beginning of the winter, for the purpose of bringing the subject of rational stock-feeding to the attention of as many as possible, and while the tables and some other parts are practically like parts of Bulletin No. 4, yet no excuse is needed so long as there is so much feeding which is done without any regard to the requirements of the animal.

Rational methods in stock feeding depend upon two things. First, we must know what a given animal requires daily; second, we must have some means of knowing where and how to get these materials in the right quantity and proportion. These two requirements are satisfied by Tables I. and II.

TABLE I.

GERMAN "FEEDING STANDARDS."

1,000 lbs. of live weight required daily.	Digestible Substances.		Nutritive ratio.
	Albuminoids.	Non-albuminoids.	
	lbs.	lbs.	
Oxen, at rest	0.7	8.37	1 : 12
Oxen, moderately worked	1.6	12.05	1 : 7.5
Oxen, heavily worked	2.4	14.45	1 : 6
Oxen fattening	3.0	16.55	1 : 5.5
Cows, giving milk	2.5	13.50	1 : 5.4
Horses, light driving	1.8	12.70	1 : 7
Horses, heavily worked	2.8	15.40	1 : 5.5
Growing cattle	2.5	15.00	1 : 6
Sheep, for wool	1.2	10.80	1 : 9
Sheep, fattening	3.0	16.45	1 : 5.5
Swine, fattening	4.0	24.00	1 : 6

TABLE II.

COMPOSITION OF "FEEDING STUFFS."

	Digestible Substances.		Nutritive ratio.
	Albuminoids.	Non-albuminoids.	
	lbs.	lbs.	
Herd's-grass (timothy) hay	3.45	48.71	1 : 14
Redtop hay	4.74	48.19	1 : 10
Mixed hay	3.71	47.61	1 : 12.8
Mixed hay and clover	4.85	46.40	1 : 9.5
Salt marsh hay	2.27	45.83	1 : 20
Clover hay	7.53	43.60	1 : 5.7
Vetch hay	9.20	37.67	1 : 4
Oat hay	4.85	44.83	1 : 9.2
Winter rye hay	10.30	51.70	1 : 5
Millet hay	4.67	45.43	1 : 9.7
Rowen	6.81	41.74	1 : 6.1
Oat straw	1.45	43.31	1 : 30
Bean vines	5.00	36.45	1 : 7.3
Corn stover	2.15	41.38	1 : 19
Ensilage (northern corn)	1.47	14.80	1 : 10
Ensilage (southern corn)	1.32	12.73	1 : 9.6
Ensilage (sweet corn)	1.84	14.92	1 : 8
Pasture grass	2.50	10.90	1 : 4.4
Green rye	2.00	12.87	1 : 6.4
Potatoes	1.42	17.70	1 : 12.4
Sugar beets	1.50	7.81	1 : 6.5
Corn and cob meal	7.13	66.52	1 : 9.3
Corn meal	7.78	71.60	1 : 9.2
Barley meal	9.54	65.95	1 : 6.9
Oats, ground	9.90	58.16	1 : 5.9
Buckwheat, ground	7.70	66.71	1 : 8.7
Linseed (old process)	28.12	53.21	1 : 1.9
Linseed (new process)	28.57	44.30	1 : 1.5
Cottonseed meal	31.36	42.26	1 : 1.3
Shorts	13.26	52.70	1 : 4
Middlings	13.35	57.72	1 : 4.3
Gluten	25.14	61.90	1 : 2.4
Brewers' grains (wet)	4.73	16.22	1 : 3.4
Malt sprouts	18.36	52.18	1 : 2.8

WHAT THE TABLES ARE.

Table I., called "Feeding Standards," tells us at a glance how much digestible material is required daily for 1,000 lbs. live weight for the various animals under the several conditions mentioned. This table originated in Germany and represents the average of a great number of carefully conducted practical tests, in which the food was weighed and samples of it analyzed and its digestibility determined. It is very reasonable to suppose that these results are, in the main, reliable and accurate; that variations from them are

sometimes profitable is well known, and from the work that has been done in our own country it would seem that the proportion of non-albuminoids (starch, sugar, fat, etc.) to albuminoids might well be made less than the tables indicate, but the fact that we may depart in a small way from these tables does not in the least reduce their value as guides to good feeding.

The column headed "digestible albuminoids," includes that part of the food which contains the nitrogen of the plant. It will be noticed that the per cent of albuminoids varies greatly in different fodders. In dry fodders, oat straw has only 1.45 pounds in a hundred, while cottonseed meal has 31.36. Hay and the dry fodders commonly found on the farm have about 5 per cent of digestible albuminoids, while the grains and concentrated feeding stuffs run from 7 to 35 per cent. It must be remembered that this part of the food is very valuable, for the muscle of the growing animal, the casein or curd of the milk, wool, feathers, hair, etc., must be formed from the albuminoids of the food. Neither starch, sugar, nor oil can be converted into muscle or casein by the animal. It is also believed that the fat in the milk or the other fat in the body comes quite largely from the albuminoids, but fat may also come from the starch, sugar, and oil of the food. The column marked "digestible non-albuminoids" includes the starch, sugar, and fiber, plus the fat, multiplied by $2\frac{1}{2}$, for it is assumed that one pound of fat is equal in nutritive value to $2\frac{1}{2}$ pounds of starch: by this arrangement we get the whole of the nutritive matter of the food grouped in two parts. The third column shows the ratio of non-albuminoids to albuminoids; for example, corn meal has 7.78 per cent of albuminoids and 71.6 per cent of non-albuminoids, the "nutritive ratio" is 1 : 9.2, which is the same as saying that for every pound of the former there are 9.2 pounds of starch, sugar, and fat (non-albuminoids).

In these tables then, we have the means of finding the

amount of nutritive matter required daily by any animal. The live weight of any animal being known, we have only to look in Table I., and find the corresponding kind of animal, the table will show what would be required if the live weight were 1,000 lbs.; from this we find the amount necessary for any weight by multiplying that necessary for 1,000 by the weight under consideration and remove the decimal point three places to the left. Example: Given a cow weighing 1,185 pounds, and producing milk, what amount of albuminoids and non-albuminoids will be required daily? Table I. shows that cows giving milk require 2.5 lbs. of albuminoids and 13.5 lbs. of non-albuminoids daily per 1,000 lbs., $2.5 \times 1,185 = 2,962.5$, removing point three places to the left, $= 2.96$ lbs. of albuminoids required; $13.5 \times 1,185 = 15,997.5$, removing point three places, $=$ 15.99 lbs. non-albuminoids required. The same rule applied under any condition or for any weight will give "amount required."

The second step is to select from Table II. such fodders and grains as will give this amount; here is where the skill of the feeder is required in selecting a suitable variety. If hay is the foundation, use $1\frac{1}{2}$ per cent of the live weight of the animal of hay, that is, for a 1,000-lb. animal use about 15 lbs. of hay, and in addition to this 1 per cent, or 10 lbs., of any coarse fodder like corn stover (corn stalks from which ears have been husked), well cured straw, rye cut for fodder, millet, or bean vines.

Where ensilage is to be fed, take 5 per cent of the live weight of the animal of ensilage, that is, for a 1,000-lb. animal, 50 lbs., and add to this one half per cent, or 5 lbs., of coarse fodder; these two combinations may be regarded as foundations to which the grain ration is to be fitted. Our coarse fodders, hay and ensilage, all with two or three exceptions contain much too large a percentage of non-albuminoids to meet the requirements of cows. Oat straw has 30 lbs. of digestible non-albuminoids to 1 of albumi-

noids (see third column, Table II.); corn-fodder has a "nutritive ratio" of 19; bog meadow or swale hay, 20; herd's-grass, 14; redtop, 10; millet, 9.7; etc. Now from Table I. we see, leaving out animals standing idle, that our different domesticated animals require from 5.4 to 9 pounds of non-albuminoids to 1 of albuminoids; here is where the tables show us the deficiency of such fodders. To make good this deficiency we must look for some material that has an excess of the albuminoids; running down column three in Table II., linseed, cottonseed, shorts, middlings, and gluten are seen to have nutritive ratios as follows, respectively, 1.5, 1.3, 4, 4.3, 2.4. Now here is a class of foods as much too rich in the muscle-producing part of the food as the coarse fodders and hay are too poor; hence a judicious mixture of one set with the other will correct the deficiencies of each. But how shall we know the proportion in which to mix them? We have seen that a cow weighing 1,000 lbs., giving milk, requires daily the following: Digestible albuminoids, 2.50 lbs.; digestible non-albuminoids, 13.50 lbs.

We will next see what our two "foundations" furnish. From Table II. it is easily figured that:

	Digestible. Albuminoids. lbs.	Digestible. Non-albuminoids. lbs.
15 lbs. mixed hay and clover furnish ...	.56	7.14
10 lbs. corn stover furnish.....	.22	4.14
Total furnished.....	.78	11.28
Total required.....	2.50	13.50
Deficiency to come from grain.....	1.72	2.22

The following will give a ration near enough to the standard:

		Albuminoids.	Non-albuminoids.
Cottonseed,	4 lbs., = 3 qts., =	1.26	1.68
Shorts,	2 lbs., = 3 qts., =	.26	1.04
Middlings,	1 lb., = 1 qt., =	.13	.57
		1.65	3.29

Putting this ration together we get the following:

	Albuminoids. lbs.	Non-albuminoids. lbs.
From hay and stover.....	.78	11.28
From grain.....	1.65	3.29
	2.43	14.57
Required by German standard.....	2.50	13.50

This ration has a nutritive ratio of 1:6, which is narrow as we can afford to go.

Our second "foundation" plus its grain ration figures as follows:

	lbs.	qts.	Albuminoids.	Non-albuminoids.
Ensilage,	50		.74	7.40
Millet,	5		.23	2.27
Gluten,	2	3	.75	1.85
Middlings,	4	3½	.54	2.30
Shorts,	1	1½	.13	.52
			2.39	14.34

Computing and balancing rations by the aid of the tables requires nothing but simple arithmetical calculations, which any feeder in the State can make if he will, and while many will find that by years of observation in the barn they have hit upon rations which the use of these tables cannot better, yet the probability is that three fourths would find by a very few minutes of figuring that they have been feeding too much of the non-albuminoids, in many cases the nutritive ratio being as wide as 1:12. As a rule we are too liberal in our use of corn meal, which in itself is lacking in albuminoids, but which is too often fed with foods much more deficient in this same direction.

If the foundation of our rations for milk was clover hay, then we might well depend upon corn meal for our grain ration, but with fodders whose nutritive ratio is from 10 to 20, that is, has 10 to 20 times as much digestible starch, sugar, fat, etc., as of albuminoids, it is poor economy to buy corn meal when there are so many kinds of fodders in

the market, like cottonseed, gluten, linseed, middlings, and shorts, which are rich in just those parts in which the hay, ensilage, corn fodder, etc., are lacking. If the farmers of this State would buy less corn meal and more of the foods above mentioned, a considerable saving might be brought about in the cost of the ration, for the reason that with these foods much of the straw, swale hay, and other coarse fodders might be substituted in place of the English hay which it is now necessary to feed. By way of illustrating this I will give two rations, which will show the force of what has been said:

No. 1.

	lbs.	qts.	Albuminoids.	Non-albuminoids.
Mixed hay,	25		.93	11.9
Corn meal,	6	8	.48	4.2
			1.41	16.1
Required by German standard,			2 50	13.5

No. 2.

Mixed hay,	10		.37	4.76
Swale hay,	10		.22	4.58
Cottonseed,	4	3	1.26	1.68
Shorts,	2	3	.26	1.04
Middlings,	3	2½	.40	1.73
Furnished,			2.51	13.79
Required by German standard,			2.50	13.50

If we call the average value of market hay in New Hampshire $15 per ton, swale hay $8, cottonseed $25, corn meal $20, middlings $22, and shorts $20, ration No. 1 will cost 25 cents, while No. 2 will cost 22 cents. Now it will be seen at once that No. 2 furnishes a full ration, with the parts well proportioned for milk production, while No. 1 is lacking in albuminoids by more than one pound, but has an excess of non-albuminoids; the nutritive ratio of No. 1 is 1:11.4 while No. 2 is 1: 5.5. It is evident that the second ration is much better adapted for milk produc-

tion than the first and would undoubtedly give a better yield.

I would call the attention of our stock feeders to the one point of feeding well proportioned or "balanced" rations, and in this connection, would suggest that the "feeding standards" and table of "feeding stuffs" are guides which, if followed, will give this suitable proportion of parts in the rations we feed our stock. Now if any one is already feeding such a ration the satisfaction of knowing this will amply repay the little trouble there is in calculating the exact amount of nutritive matter fed; if, on the other hand, the present practice does not, within reasonable limits, correspond with the German standards, then no harm can come from modifying the grain or fodder and noting whether there is actually any increase of product or decrease of cost, for it is by this measure of dollars and cents that we must finally prove that one ration is better than another.

CHEMICAL ANALYSIS OF MATERIALS USED IN FEEDING EXPERIMENTS, WINTER OF 1888–89.

These analyses were made by Mr. F. W. Morse, chemist of the station. The grains were bought in local markets and the hay was raised on the station farm.

The analyses show the per cent of water, dry substance, ash, crude protein, nitrogen-free extract (including starch, sugar, etc.), ether extract, or crude fat, and crude fiber; the column showing this is headed "per cent in original substance." The next column shows the same computed as per cent of the dry substance instead of the original substance. Next comes per cent of digestible matter in the original substance; this is derived from the total composition by taking the average digestibility of similar foods as given by Goessman and others.* This column shows just how much useful material there is in each substance,

*Massachusetts Agricultural Experiment Station Annual Report, 1887.

for it is the digestible part of the food that determines its value for feeding purposes. The next column gives this same digestible matter grouped into albuminoids and non-albuminoids. The early and late cut hay were nearly clear timothy or herd's-grass; the former cut July 10, just as it was going out of bloom, the latter cut July 31, the seed being well filled but not hard. It must be remembered that the season of 1888 was very wet and grass was from eight to ten days behind its ordinary time of blooming and maturity.

TABLE III.

EARLY CUT HAY. (CUT JULY 10, 1888.

	Total composition.			Digestible.		
	Original substance.	Dry substance.	Amount digestible in original substance.	Albuminoids.	Non-albuminoids.	Nutritive ratio.
	per ct.	per ct.	per ct.	per ct.	per ct.	
Moisture at 212°	12.10	.....	.....			
Dry substance	87.90	.....	.....			
Crude ash	3.59	4.09	.....			
Crude protein	7.19	8.18	4.10	4.10	48.45	1:11.8
Nitrogen-free extract	49.14	55.[illegible]	36.[illegible]			
Crude fiber	25.70	29.24	14.90			
Ether extract	2.28	2.59	1.04			

LATE CUT HAY. (CUT JULY 31, 1888.

Moisture at 212°	8.63	.....	.....			
Dry substance	91.37	.....	.....			
Crude ash	4.34	4.75	.....			
Crude protein	7.08	7.75	4.04	4.04	50.34	1:12.4
Nitrogen-free extract	50.83	55.63	32.92			
Crude fiber	24.56	28.67	15.40			
Ether extract	2.56	2.80	1.17			

CORN MEAL.

Moisture at 212°	13.90	.....	.....			
Dry substance	86.10	.....	.....			
Crude ash	1.50	.....	.....			
Crude protein	10.17	11.81	8.64	8.64	72.94	1 : 8.4
Nitrogen-free extract	68 37	79.40	64.26			
Crude fiber	1.81	2.10	.61			
Ether extract	4.25	4.94	3.23			

MIDDLINGS.

Moisture at 212°	12.47	.....	.....			
Dry substance	87.53	.....	.....			
Crude ash	3.33	3.81	.....			
Crude protein	19.96	22.81	17.56	17.56	52.86	1 : 3
Nitrogen-free extract	57.17	65.30	45.73			
Crude fiber	3.89	4.45	.78			
Ether extract	3.18	3.63	2.54			

SHORTS.

Moisture at 212°	12.29	.....	.....			
Dry substance	87.71	.....	.....			
Crude ash	6.21	7.08	.....			
Crude protein	17.85	20.35	15.71	15.71	50.74	1 : 3.2
Nitrogen-free extract	49.97	56.97	39.97			
Crude fiber	9.21	10.50	1.84			
Ether extract	4.47	5.10	3.57			

COTTONSEED MEAL.

Moisture at 212°	8.86	.....	.....			
Dry substance	91.14	.....	.....			
Pure ash	5.81	6.39	.....			
Crude protein	46.32	50.82	34.27	34.27	32.70	1 : .9
Nitrogen-free extract	23.68	25.97	10.89			
Crude fiber	6.38	7.00	1.46			
Ether extract	8.95	9.82	8.14			

GLUTEN.

Moisture at 212°	10.52	.....	.....			
Dry substance	89.48	.....	.....			
Ash	.70	.....	.....			
Crude protein	29.70	33.20	25.24	25.24	58.21	1 : 2.3
Nitrogen-free extract	54.90	61.34	51.60			
Crude fiber	.81	.91	.21			
Ether exract	3 37	3.77	2.56			

FEEDING EXPERIMENTS WITH CORN MEAL, COTTONSEED, AND SHORTS.

Table IV. gives the full details of an experiment comparing corn meal, cottonseed meal, and shorts. The rations in each case were richer in albuminoids than is believed to be necessary, but it will be noticed that those in which corn meal is used are in strict accord with the "German standards," and that the substitution of cottonseed for corn meal reduced the ratio from 5.5 to 4.5 on an average, which is a very narrow ratio. The object of this experiment was to determine, if possible, whether an increase in albuminoids would increase the yield of milk. Table IV. shows the number of the period and the number of days in each period, as well as the dates. The name of the cow and her breed are given in the left-hand column, next comes the kind of food used in the ration, and in the third column the amount of each substance fed daily, together with the nutritive ratio of the food, while at the bottom of this column is the amount of milk produced per period and per day; the fourth, fifth, and six columns are repetitions of the third, except that changes from corn meal to cottonseed, and the reverse, occur; next comes the total milk for each cow for the whole time she was in the experiment, followed by two columns dividing this total into two parts, one produced while corn meal was fed, the other while cottonseed was in the ration; the last two columns show the gain of milk occasioned by changing from one grain to the other. When corn meal gives the greatest yield the excess is put in column marked "corn meal," and when cottonseed meal gives best results the gain is found in the column headed "cottonseed meal."

TABLE IV.

		PERIOD. 14. Mar. 11 to Mar. 25.	15. Mar. 25 to Apr. 8.	16. Apr. 8 to Apr. 22.	17. Apr. 22 to May 6.
		lbs.	lbs.	lbs.	lbs.
Northboro'Belle (Holstein.)	Ensilage,	60	60	60	60
	Rye hay,	5	5	5	5
	Shorts,	2	2	2	2
	Corn meal,	2		2	
	Cottonseed meal,		2		2
	Gluten,	4	4	4	4
	Milk per period,	408.13	363.56	371.72	361 29
	Milk per day,	29 15	25.97	26.55	25.81
Duchess. (Durham.)	Ensilage,		50	50	
	Rye hay,		5	5	
	Shorts,		2	2	
	Corn meal,		2		
	Cottonseed meal,			2	
	Gluten,		4	4	
	Milk per period,		149.56	151.64	
	Milk per day,		10.68	10.83	
Colinka. (Holstein.)	Ensilage,			60	60
	Rye hay,			10	10
	Shorts,			2	2
	Corn meal.			2	
	Cottonseed meal,				2
	Gluten,			4	4
	Milk per period,			188.68	189.50
	Milk per day,			13.48	13.54

				Per day.	Nutritive ratio.
	lbs.	lbs.	lbs.	lbs.	
Milk produced "corn meal" periods,		779.8		27.82	
Milk produced "cottonseed meal" periods,		724.8		25.86	
Daily excess in favor of corn meal,				1.96	
Rations contained:	Albuminoids.	Non-Albu'ds.	Total.		
Corn meal ration,	2.90	16.27	19.17		1:5.6
Cottonseed ration,	3.41	15.46	18.87		1:4.5
Milk produced "corn meal" periods,		149.56		10.68	
Milk produced "cottonseed meal" periods,		151.64		10.83	
Daily excess in favor of cottonseed meal,				.15	
Rations contained:	Albuminoids.	Non-Albu'ds.	Total.		
Corn meal ration,	2.75	14.79	17.54		1:5.4
Cottonseed ration,	3.26	13.98	17.24		1:4.3
Milk produced "corn meal" periods,		188.68		13.48	
Milk produced "cottonseed meal" periods,		189.50		13.54	
Daily excess in favor of cottonseed meal,				.06	
Rations contained:	Albuminoids.	Non-Albu'ds.	Total.		
Corn meal ration,	3.42	18.85	22.27		1:5.5
Cottonseed ration,	3 93	18.05	21.98		1:4.6

TABLE IV. — *Continued.*

		PERIOD. 14 Mar. 11 to Mar. 25.	15 Mar. 25 to Apr. 8.	16 Apr. 8 to Apr. 22.	17 Apr. 22. to May 6.
		lbs.	lbs.	lbs.	lbs.
Maranee. (Holstein.)	Ensilage,		60	60	
	Rye hay,		5	5	
	Shorts,		3	3	
	Corn meal,			2	
	Cottonseed meal,		2		
	Gluten,		3	3	
	Milk per period,		456.99	422.24	
	Milk per day,		32.04	30.16	
Gleam. (Holstein.)	Ensilage,			50	50
	Rye hay,			5	5
	Shorts,			2	2
	Corn meal,			2	
	Cottonseed meal,				2
	Gluten,			4	4
	Milk per period,			369.67	390.13
	Milk per day,			26.41	27.87
Catonos Pink. (Jersey.)	Early cut hay,			15	15
	Rye hay,			5	5
	Shorts,			2	
	Corn meal,			2	4
	Gluten,			2	2
	Milk per period,			139.43	142.38
	Milk per day,			9.95	10.17
Princess Leto. (Jersey.)	Ensilage,	45	45	45	45
	Hay,	5	5	5	5
	Shorts,		2	2	
	Corn meal,	2			2
	Gluten,	3½	3½	3½	3½
	Milk per period,	256.50	247.73	246.63	250.57
	Milk per day,	18.32	17.69	17.62	17.90

	lbs.	lbs.	lbs.	Per day. lbs.	Nutritive ratio.
Milk produced "corn meal" periods,		422.24		30.16	
Milk produced "cottonseed meal" periods,		456.99		32.69	
Daily excess in favor of cottonseed,				2.53	
Rations contained:	Albuminoids.	Non-Albu'ds.	Total.		
Corn meal ration,	2.80	16.19	18.99		1 : 5.8
Cottonseed ration,	3.31	15.39	18.70		1 : 4.6
Milk produced "corn meal" periods,		369.67		26.41	
Milk produced "cottonseed meal" periods,		390.13		27.87	
Daily excess in favor of cottonseed.				1.46	
Rations contained:	Albuminoids.	Non-Albu'ds.	Total.		
Corn meal ration,	2.75	14.79	17.54		1 : 5.4
Cottonseed ration,	3.26	13.98	17.24		1 : 4.3
Milk produced "corn meal" periods,		142.38		10.17	
Milk produced "shorts" periods,		139.43		9.95	
Daily excess in favor of corn meal,				.22	
Rations contained:	Albuminoids	Non-Albu'ds.	Total.		
Corn meal ration,	1.98	14.09	16.07		1 : 7.1
Shorts ration,	2.13	13.65	15.78		1 : 6.4
Milk produced "corn meal" periods,		507.07		18.11	
Milk produced "shorts" periods,		494.36		17.65	
Daily excess in favor of corn meal.				.46	
Rations contained:	Albuminoids.	Non-Albu'ds.	Total.		
Corn meal ration,	1.92	12.67	14.59		1 : 6.6
Shorts ration,	2.06	12.22	14.28		1 : 5.9

These five cows, when on corn meal, produced daily 108.55 pounds of milk, and when on cottonseed 110.74, a gain of 2.19 pounds, which is .44 of a pound per cow per day. This is too small an amount to be of any great value in getting at the relative efficiency of the two rations, but it will be noticed that in only one case is there an excess on the corn meal side, while in two cases there is practically no difference, the two remaining cows showing a very substantial increase due to the cottonseed.

There is another point which should be considered, though no definite correction can be applied. In four cases the corn preceded the cottonseed, and in one case (that of Maramee) the cottonseed came first, and as all of the cows were naturally shrinking in milk yield, it follows that in four cases the cottonseed is shown at a disadvantage equal to this shrinkage, while in one case the corn meal loses in the same way. Northboro' Belle unquestionably did better on the corn meal than on the cottonseed, while Maramee and Gleam gave evidence just the opposite.

The total digestible matter, that is, the sum of the albuminoids and non-albuminoids, is somewhat less in the cottonseed than in the corn meal ration; the average for the five cows is 18.81 pounds daily with cottonseed, and 19.10 pounds with corn meal, but it is also true that as the market averages the cottonseed ration costs about three mills more per day than the other. Taking all the facts as they stand, the following conclusions seem warranted:

1. Narrowing the nutritive ratio from the German standard of 5.4 to 4.5 does not materially increase the amount of milk.

2. It appears that under the conditions of the experiment, a pound of digestible matter was slightly more efficient in the narrow than in the wide ration.

3. We must not lose sight of the fact that the manure from the cottonseed ration must have been more valuable, for the reason that corn meal contains only one half as

much phosphoric acid, one third as much potash, and one third as much nitrogen, as does cottonseed meal. This becomes an important matter when we consider the field work as well as our feeding.

CORN MEAL COMPARED WITH SHORTS.

From this table it is seen that the two cows produced daily, when on the corn meal ration, 28.28 pounds, and on the shorts, 27.60 pounds, a gain of .68 of a pound in favor of corn meal, or .34 of a pound for each cow. The dry matter in the rations is slightly less with the shorts than with the other, while the cost of the ration is the same. In this experiment the cow Pink was giving a very uniform quantity of milk and had been shrinking very little for two months, while Princess Leto was so fed that the shrinkage, provided it was uniform from period to period, would not work to the disadvantage of either ration ; it is probable, therefore, that the shorts were actually of less feeding value than the meal.

TABLE V.

		PART 1.			PART 2.		
		*9 Dec. 24 to Jan. 14.	10 Jan. 14 to Jan. 28.	11 Jan. 28 to Feb. 11.	16 Apr. 8 to Apr. 22.	17 Apr. 22 to May 6.	†18 May 6 to May 13.
Nora 2d. (Durham.)	Early hay	25	25	25	.....	.....	.....
	Ensilage	.....	.....	.....	50	50	50
	Corn meal	2	2	2	2	2	2
	Middlings	.....	2	2	2	.....	.....
	Shorts	2	.....	.....	.....	2	2
	Gluten	3	3	3	3	3	3
		587.03	387.27	379.07	332.25	326.09	161.51
		27.95	27.66	27.08	23.73	23.29	23.07

* Period 9 was of 21 days instead of 14.
† Period 18 was for 7 days instead of 14.

The experiment recorded in Table V. must be divided into two parts, as there was an interval of four periods devoted to other work with the same cow.

Part 1, 21 days on shorts, the yield was	587.03, or	27.95	daily.
Part 1, 28 " middlings, " "	766.34, or	27.37	"
Daily excess in favor of shorts		.58	
Part 2, 14 days on middlings, the yield was	332.25, or	23.73	daily.
Part 2, 21 " shorts, " "	487.60, or	23.22	"
Daily excess in favor of middlings		.51	
Or, averaging the two parts, the middlings gave		25.55	daily.
The shorts gave		25.58	"

The composition of the two rations was :

		Albuminoids.	Non-albuminoids.	Total.	Nutritive ratio.
Part 1,	Short	2.27	16.58	18.85	1 : 7.3
	Middlings	2.30	16.61	18.91	1 : 7.2
Part 2,	Shorts	1.98	11.62	13.60	1 : 6.9
	Middlings	2.02	11.65	13.67	1 : 5.7

This experiment shows, like the other, that a change of grain, so long as there is no wide departure in the digestible matter, does not materially affect the results, and as the above rations were compounded, the shorts are as effective as the middlings, but the cost is less by about one cent daily with the shorts.

GLUTEN COMPARED WITH MIDDLINGS.

A single experiment with gluten and middlings resulted as follows :

NORA 2D. (Durham.)

Late cut hay	20	20
Cured oats	5	5
Corn meal	2	2
Middlings	2	
Gluten		2⅛
Shorts	2	2
Milk per day	25.59	27.62
Dry matter in ration	17.71	18.07
Nutritive ratio	1 : 8.4	1 : 7.7

In this case there is an unmistakable gain in favor of the gluten meal. The amount used was such that the cost of the rations was identical.

GLUTEN COMPARED WITH SHORTS.

COUNTESS GAZELLE. (Jersey.)

Hay	20	20
Corn meal	2	2
Shorts	2	
Gluten	2	3½
Milk per day	18.71	19.47
Dry matter in ration	15.49	15.41
Nutritive ratio	1 : 7.6	1 : 7.2

As in the last case the cost of these two rations is the same, but it will be seen that the gluten is the more efficient, and this, too, against the natural shrinkage of the yield, for in each case the gluten was fed last.

The change in nutritive ratio is not great, but it will be noticed that the results, so far as they go, would seem to indicate that the middlings and shorts rations, with a ratio of 8.4 and 7.6 respectively, were too wide, and that narrowing them to 7.7 and 7.2, though not a great change, is, nevertheless, one that has resulted in a considerable increase of milk, and we may well ask the question whether we can afford to go beyond 7 as the widest limit. I am inclined to think that we cannot.

In conclusion, then, the following conclusions may be drawn:

1. That with rations whose nutritive ratio is below 1 : 7, it makes very little difference whether we use cottonseed, shorts, middlings, or corn meal, so far as milk is concerned, but if we consider the value of the manure the grains will be valued in the order in which they stand.

2. When the nutritive ratio is wider than 1 : 7.5 a substantial gain may be expected by substituting some grain that will narrow this ratio.

3. A nutritive ratio of 1 : 7 is as wide as we can profitably use.

I am convinced from these and other experiments, that the proportion and amount of digestible constituents in

the ration are of more importance than the source of these constituents, and that the cost of the grain must be the factor that will influence the feeder.

Once more let me urge every farmer to note what he is feeding, both in kind and amount, and then from Table II. compute the digestible nutritive matter consumed daily and compare this with Table I. If it is fouud that the ratio of non-albuminoids to albuminoids is very wide, that is, over 7.5, then a few easily made experiments, in which either cottonseed, gluten, middlings, or shorts is substituted for corn meal, will enable any one to determine whether a closer following of the German standards will be profitable. There can be no loss result from testing this important matter, and valuable information may be obtained.

In the following pages will be found the results of some work done by Professor Morse in determining the composition of grass at various stages of its growth. These results are of value to deserve study. There are also given miscellaneous analyses which have been made from time to time, as well as the financial statement for the year ending June 30, 1889.

Respectfully submitted.

G. H. WHITCHER, *Director.*

GROWTH OF TIMOTHY GRASS.

F. W. MORSE, CHEMIST.

The work recorded in the following pages was conducted for the purpose of determining the changes in the nutritive constituents of timothy grass (*Phleum pratense*) during its growth, the yield per acre, and the best time for cutting the same in order that the largest amount of digestible matter might be obtained.

The samples were collected, dried, and preserved during the summer of 1888, but pressure of other work compelled the doing of the analytical work and the tabulating of results when opportunities occurred.

A portion of a field of timothy was chosen where few other grasses were mixed with it. By means of a wooden frame, the grass on a square yard of surface was inclosed and then cut with a pair of sheep shears. The grass was then weighed and spread on a cloth to dry. When apparently as dry as hay would be, as put into the barn, it was again weighed and the loss of water calculated.

A portion of this air-dried grass was taken for a sample and preserved for further drying and analysis. The yield per acre of green grass, air-dried hay, and absolute dry matter was calculated from the weight of that upon one square yard.

When each sample was collected, a note was made of the period of growth and average height of the grass. The original plan was to collect the samples once in five

days; but on two occasions, rain caused the collecting to be postponed one day, and one sample was lost by molding, owing to continued wet weather. (At the time, we had no means for drying large samples in drying ovens.)

Table I. gives the yield per acre at the different periods of growth. The growth was very rapid during the early life of the plant, especially from the time the heads appeared until the plants were in bloom. From that time the apparent growth ceased, and the energy of the plant was expended in forming seed. The yield of green grass increased with the increase in height of the plant, then it began to increase with the blooming, and ripening of the seed. But this increase and decrease was principally in the amount of water, as the yield of air-dried hay and of dry matter increased until the last cutting.

These results may be seen in Table I.

TABLE I.

Date of Cutting.	Period of growth.	Height.	Yield per acre, grass.	Yield per acre, hay.	Yield per acre, dry matter.
		in.	lbs.	lbs.	lbs.
June 4	Blade	8	2,269	453	397
" 15*	Blade	11	5,597	1,059	903
" 20	Heads appearing	12	4,386	1,505	1,299
" 25	Heads fully formed	20	5,198	1,875	1,633
" 30	Beginning to bloom	24	5,176	1,974	1,753
July 5	One half in bloom	26	5,219	2,252	1,956
" 10	Bloom fading	30	4,910	2,269	2,025
" 16*	Bloom nearly gone	30	4,823	2,419	1,905
" 21	Seed beginning to form	30	3,629†	1,835†	1,565†
" 26	Seed fully formed	30	4,867	2,604	2,165
" 31	Seed becoming hard	30	4,449	2,391	2,124

* The rain, which caused the postponement of cutting one day, also caused an increase in the amount of water by adhesion to the surface of the leaves thus accounting for the large amount of green grass.

† The small yield here must be accounted for on the ground of less number of plants on this square yard.

The analyses were made by the official methods of the Association of Agricultural Chemists, and were to determine the changes in composition of the plants, at the

different periods. The figures were calculated to the dry substance in order to more easily compare them. Table II. gives the results.

TABLE II.

Date of Cutting.	Water.	Dry matter.	Ash.	Ether extract.	Crude protein.	Crude fiber.	Nitrogen-free extract.	Total nitrogen.	Albuminoids, nitrogen.
June 4....	82.51	17.49	5.26	5.33	12.05	20.55	56.81	1.93	1.52
" 15*...	83 87	16.13	6.98	5.17	11.39	23.74	52.72	1.82	1.43
" 20.....	70.39	29.61	6.68	4.07	9.73	25.78	53.74	1.56	1.14
" 25.....	68.59	31.41	5.96	3.28	8.32	30.11	52.33	1.33	.95
" 30.....	66.11	33.89	5.77	2.57	7.36	27.57	56.73	1.18	.81
July 5.....	62.52	37.48	6.20	2.71	7.28	28.52	55.29	1.16	.88
" 10.....	58.77	41.23	5.60	2.71	6.28	29.78	55.63	1.00	.87
" 16*...	60.48	39.52	6.32	2.80	6.34	32.09	52.45	1.02	.95
" 21.....	56.86	43.14	5.44	2.91	6.26	29.68	55.71	1.00	.91
" 26.....	55.51	44.49	5.34	2.83	5.67	29.48	56.68	.91	.81
" 31.....	52.17	47.83	5.44	2.56	6.76	28.89	56.35	1.08	.80

* Rains just previous to cutting caused the increase in water, breaking the continuity of the series. It also undoubtedly caused an increase in the amount of ash.

The percentage of water steadily decreased, though in Table I. it was shown that the actual amount increased with the increase in yield of green grass. The percentage of dry matter increased as that of water decreased. The ash was more abundant during the rapid growth of the plant than after the growth had ceased. The ether extract decreased till blossoming, then increased until the seed began to form, when it again decreased, reaching its lowest point as the seed began to harden. The crude fiber increased steadily, with two exceptions, until the formation of seed, after which there was a slight decrease. The two exceptionally high results caused me to carefully repeat the analysis in each sample, without finding any appreciable difference. The exceptions were accounted for as follows: In the sample of June 25, the increase of fiber was accompanied by a decrease in all the other constituents. The growth of the plants was at this period very rapid,

since it amounted to a height of eight inches in the five days. The building of cells and consequently the formation of cellulose or fiber must have been rapid, and apparently out of proportion to the formation of the other constituents. In the sample of July 16, the increase of crude fiber was at the sole expense of non-nitrogenous extract, showing that the formation of starch was hindered. On looking at the record of rain on the preceding day, this hindrance was accounted for by lack of sunshine.

The nitrogen-free extract after the grass had nearly reached its full height remained nearly constant, except in the sample of July 16, which has been explained. Crude protein steadily decreased with the development of the plants, although nearly constant after the bloom began to fade. The increase at the time of taking the last sample I attribute to the presence of a second growth caused by the wet season of that year (1888).

The proportion of albuminoids to total nitrogen varies noticeably with the growth of the plant. The variations are as follows in percentage of total nitrogen: June 4, 79 per cent; June 15, 79 per cent; June 20, 73 per cent; June 25, 71.5 per cent; June 30, 68.5 per cent; July 5, 76 per cent; July 10, 87 per cent; July 16, 93 per cent; July 21, 91 per cent; July 26, 89 per cent; July 31, 74 per cent. From June 15 to 30, the period of most rapid growth, the proportion of albuminoids decreased; during the blossoming time the proportion increased; as the seed formed there was a slight decrease. The large decrease in the last sample I attribute to the same factor which caused the increase of protein, viz., the second growth.

From these figures it appears that the albuminoids are transformed into the more soluble amides during the period of fastest growth, and again as the seeds are being formed, in order to be more readily transported from one part of the plant to another. Unfortunately, I had no samples of

fully ripened grass to note the changes which take place during the ripening.

In order to determine the period at which to get the largest amount of digestible matter per acre, the yields per acre of each nutrient were calculated for each sample. They are as follows:

TABLE III.

Date.	Dry matter.	Ether extract.	Crude protein.	Crude fiber.	Nitrogen-free extract.
	lbs.	lbs.	lbs.	lbs.	lbs.
June 4.	397	21.2	47.8	81.5	224.5
June 15	903	46.7	102.8	214.4	476.1
June 20	1,299	52.9	126.4	334.9	698.1
June 25	1,633	53.6	135.9	491.7	854.5
June 30	1,753	45.1	129.0	483.3	994.5
July 5	1,956	53.0	142.4	557.8	1,081.5
July 10	2,025	54.9	127.2	603.0	1,126.5
July 16	1,905	53.3	120.8	611.3	999.2
July 21	1,565	*			
July 26	2,165	61.3	122.8	638.2	1,227.1
July 31	2,124	54.4	143.6	613.6	1,196.9

* Not calculated because of small yield of dry matter.

On carefully scanning the above table, it was evident that a comparison of the actual yield of digestible nutrients must be made. For this I selected the following pairs of samples as best adapted for the comparison, when total yield and period of growth were considered, — June 25 and 30, July 5 and 10, and July 26 and 31.

The first pair would represent the yield at the beginning of bloom; the second pair, the yield in full bloom; and the third pair, that when gone to seed.

For digestion coefficients, I used those given by Armsby * for grass at different stages of growth, as follows:

Period.	Ether extract.	Protein.	Crude fiber.	Nitrogen-free extract.
Just before bloom	58	76	51	70
In full bloom	64	65	47	68
Past bloom	60	59	40	66

* Manual of Cattle Feeding. Page 264.

The coefficients in the last case would really give a larger yield than would probably be true, as my samples were of somewhat older growth. The comparison is given in the following table:

TABLE IV.

Date of Cutting.	Period of growth.	Ether extract.	Crude protein.	Crude fiber.	Nitrogen-free extract.
		lbs.	lbs.	lbs.	lbs.
June 25 to 30	Beginning to bloom	28.6	100.6	248.6	647.1
July 5 to 10	Full bloom	34.5	87.6	272.8	700.7
July 26 to 31	Gone to seed	34.7	68.5	250.3	799.9

This comparison shows that there were more pounds of digestible protein in the grass cut before bloom than in that cut later, but the ether extract, crude fiber, and nitrogen-free extract increased in the later cut samples. This was especially the case in the grass cut while in full bloom. The increase between the second and third periods was confined to the nitrogen-free extract, while protein and fiber decreased. The largest amount of digestible matter was obtained in this series when the grass had gone to seed. It was unfortunate that the yields of samples collected on July 15 and 21 were worthless, as their chemical composition was slightly better than that of the last two samples. A square yard is a small area from which to judge the yield of an acre, but if a larger area were taken, it would yet be difficult to find two plots in the same field that would be exactly alike.

CONCLUSIONS.

Timothy grass grows very rapidly until the blossom appears. Its fastest growth is between the appearance of the head and beginning of bloom.

The amount of grass per acre increases until the time of blossoming. It then decreases. The decrease is due to loss of water.

Dry substance steadily increases until the plant forms seed.

The young grass is richest in fat and protein. The mature grass is richest in carbohydrates or fiber and nitrogen-free extract.

Timothy yields the largest amount of digestible protein when cut at the beginning of bloom.

The total amount of digestible matter is largest when the grass has passed out of blossom or gone to seed.

MISCELLANEOUS ANALYSES.

During the year 1889 there were made the following analyses of substances not connected with experiments, but of sufficient interest to be published.

FODDERS.

Mixed feed, — purchased at Lebanon for use by the station.
Brown hay, — hay which had become heated in the mow.

	Mixed feed.	Brown hay.
Water	11.89	18.25
Ash	3.63	4.50
Ether extract	3.67	2.11
Crude fiber	5.96	23.54
Nitrogen-free extract	50.03	45.19
Crude protein. Total N × 6.25	24.82	6.41
	100.00	100.00
Albuminoids, Alb. N. × 6.25	23.65	5.64

FERTILIZERS.

Bellamy bone phosphate, — from Dover, N. H.
Tobacco and sulphur, — from secretary board of agriculture.

	Bellamy phos.	Tobacco and sulphur.
Moisture	5.82	12.18
Nitrogen	3.50	2.19

	Bellamy phos.	Tobacco and sulphur.
Water-soluble phosphoric acid....	7.09	
Citrate-soluble " "	4.27	
Insoluble " " ...	1.75	
Total " "	13.11	0.71
Potassium Oxide.....	1.37	7.80
Calcium "		3.52
Magnesium "		0.92
Total sulphur.....		2.57
Insoluble matter.....		0.48

MUCK.

From West Canaan. Sample from pile dug in August, 1888, and exposed to the weather for ten months.

Moisture.....	55.28
Ash	27.55
Nitrogen.....	0.54

MILK.

Two samples from Lyme, May 30.

	Total solids.	Fat.
Morning milk from herd of three cows	14.78	5.10
Morning milk from herd of two cows	14.94	5.54

Some milk supposed to have been watered was received from Hazen's Mills. Two lots of two samples each were received on successive days, and were said to be from the same producer.

	Specific gravity.	Total solids.	Fat.
First day, morning milk.....	1.0212	7.92	2.32
First day, night "	1.0238	10.28	3.73
Second day, morning "	1.0331	13.01	4.01
Second day, night "	1.0320	14.35	5.35

Later in the season a third lot of two samples was received. One sample was too sour for analysis, the other had the following composition :

Specific gravity, 1.0234 ; total solids, 10.90 ; fat, 4.39.

This milk was striking for its low specific gravity and total solids, while its fat was equal to good milk.

Three samples of buttermilk were received from Franklin Falls. Fat alone was determined.

Lot 1, 0.86. Lot 2, 0.39. Lot 3, 0.46.

A sample of skim-milk obtained from the United States Butter Extractor at the Bay State Fair, Boston, contained .67 per cent of fat.

BUTTER.

Sample from United States Butter Extractor at Bay State Fair, Boston.

Water	18.01
Fat	78.94
Casein	0.86

INSECT EXTERMINATOR.

Sample from North Epping. Dark colored, viscous liquid, with an alkaline reaction and odor resembling coal tar. Made a separation into fractions by distillation.

Light naphtha	90° — 110° C.	10.33
Heavy "	110° — 170°	15.33
Carbolic oils	170° — 230°	25.00
Tarry matter by difference		49.34
Specific gravity at	25° C.	1.27

The substance and distillates resemble coal-tar in all their properties.

PAINT.

Samples of "Burnt Sienna," "burnt paint" and "crude paint" were received from Deerfield. The paints were apparently earthy iron ores. Iron oxide was determined in each sample and also the insoluble matter, principally silica.

	Ferric oxide.	Insoluble matter.
Burnt Sienna	82.25	7.48
Burnt paint	75.83	14.47
Crude paint	72.95	9.27

The paints were inferior to burnt Sienna by having less iron oxide and more insoluble matter.

New Hampshire Experiment Station in account with the United States.

	Dr.	Cr.
Cash	$15,000.00	
Salaries		$7,197.75
Printing		856.50
Live stock		106.26
Library		403.69
Trustees' expenses		324.10
Feeding experiments		761.54
Furniture		196.35
Field experiments		78.65
Labor		1,101.26
Chemicals and apparatus		1,365.08
Tools and equipments		678.78
Insurance		82.38
Stationery and postage		94.75
Permanent improvements		749.15
Traveling expenses		188.16
Fuel, gas, and water		335.85
Incidental expenses		479.75
	$15,000.00	$15,000.00

This is to certify that, as the authorized auditor of the board of trustees of the New Hampshire College of Agriculture, I have examined the accounts of the Agricultural Experiment Station for the fiscal year ending June 30, 1889, and find them correct; that the above is a true balance-sheet corresponding with the said accounts; that the said accounts show that the sum of $749.15 and no more was expended for repairs of buildings, and there is no cash balance.

JOSEPH KIDDER,
Auditor.

INDEX.

PART I.

PAGE

Admission 27
Agriculture, course in 28, 34
Apparatus 38
Assistance 39

Buildings 38

Calendar 4
Catalogue of graduates 48–54
non-graduates 55–57
undergraduates 25–27
Chemistry, course in 30, 36
Conant fund 10
Courses of study 28–36

Dean, report of 11
Degree 37

Electrical engineering, course in 32, 36
Examination papers 43–45
Examining committee, report of 16
Expenses 38
Experiment station 41–42

Faculty 24
Farm 38
Financial statement 14
Flint, W. F., trees of New Hampshire 59–99
Forestry, trees of New Hampshire 59–99

Graduates, catalogue of 48–54

Mechanical engineering, course in 30, 35

Non-graduates, catalogue of 55–57

Pettee, Prof. C. H., *dean*, report 11–15
President, report of 3
Prize record 45–47
Prizes 37
Report of dean 11
examining committee 16

president 5
treasurer 9

Smyth, Hon. Frederick, *treasurer*, report 9-10
Stevens, Hon. L. D., *president*, report 5-8
Students 25-27
Summary 58

Treasurer, report of 9
Trees of New Hampshire. (See Forestry.)
Trustees 3

PART II.

PAGE

Albuminoids, definition of 147
Ammonia, sulphate of 112,127
Analysis of bone 112
bone phosphate 169
brown hay 169
butter 144
buttermilk 142
chemicals producing best crops 124
corn meal 154
cottonseed meal 154
early cut hay 153
extractor butter 171
fertilizer 169
fodder articles 146
gluten 154
grass at various stages of growth 165
insect exterminator 171
late cut grass 153
manure 110, 114
middlings 154
milk 140, 170
mixed feed 169
muck 170
shorts 154

Blanchard churn, test of 142, 143
Blood, dried, as source of nitrogen 128
Board of control 103
meetings of 107
Bone, composition of 112
dissolved with sulphuric acid 112
Bones, use of, as fertilizer 112
Breeds of cows, tests of 108
Bulletins, abstracts of 108-162
Bulletin No. 5 108
" " 6 113
" " 7, test of dairy apparatus 136
" " 8, feeding experiments 145

Butter, analysis of samples from creameries 144
standard 145
per cent of total fat recovered in 141
quality of 140
Buttermilk, analysis of 142
loss of fat in 141

Chemicals, amount per acre 145
best combination of 124
compared with manure 129
cost per hundred pounds 113
formula for corn and wheat 134
formula for hay 135
formula for oats 134
formula for potatoes 135
plant food in 113
source of 112
weight per half bushel 113
where obtained and how mixed 133
Chemists, election of 107
report of 163
Churns, test of 141, 142
Clover, how affected by potash 131
Corn, best fertilizer for 134
Corn meal, analysis of 154
compared with shorts 159
feeding experiments with 155
Cottonseed meal, analysis of 154
feeding experiments with 155
Cow, daily ration for 148
Cows, tests of breeds 108
Creamery butter, analysis of 144
Crops, plant food contained in 114
value of 119, 121, 125

Dairy apparatus, test of 136
Davis churn, test of 142-143
Definitions, plant food 109
Diagram, showing effect of fertilizers 125
Director, report of 107

Ensilage, amount required per day 148
best fertilizer for 134

Feeding, cost of per year 108
standards, German 145
guide to better 152
stuffs, composition of 146
Fertilizers, analyses of 169
prepared, wrongly proportioned 117
use of 113

Fertilizer best adapted for use in New Hampshire 133
experiments, co-operative..... 107
producing best crops..... 124
and fertilizing materials 108–113
Fertilization, principles of..... 113
Field experiments with fertilizers..... 118–133
Financial statement..... 172
Fodders, analyses of..... 169
Food required daily, how determined..... 148

Gluten, analysis of..... 154
compared with middlings..... 160
compared with shorts 161
feeding experiments with 160
Grass, composition of, at various stages of growth..... 163–169

Hay, early cut, analysis of..... 153
Hay, late cut, analysis of..... 153
Hay, best fertilizer for..... 135

Letter of transmittal 105

Manure, compared with chemicals 129
chemial composition of 110, 114
experiments with..... 116
source of plant food 110
use of..... 115
weight per cord..... 111
Middlings, analysis of 154
compared with gluten 160
feeding experiments with 160
Milk, analysis of..... 170
Muck, analysis of 170

Nitrate of soda..... 112
Nitrogen removed by crops..... 109
value of from different sources..... 125–128
where obtained..... 112
Non-albuminoids, definition of..... 147
Nutritive ratio, how determined..... 147
narrower than German standard..... 158
variation from German standard 161

Oats, best fertilizer for..... 134
Officers of station 103

Phosphoric acid, less important than potash..... 122, 123, 125
removed by crops..... 109
Plan of work 107
Plant food, abundant..... 109

Plant food, definition of 109
deficient 109
removed by crops 109, 114
sources of 110–113
Plant food in manure 111
Potash, compared with phosphoric acid 121, 125, 123
effect on clover 131
effect on crops 122, 123, 124, 125
removed by crops 109
sources of 112
Potatoes, best fertilizer for 135
Prepared fertilizers, not properly proportioned 117

Rations, balancing 151
foundations for 149, 150
how computed 148, 150
Report of auditor 172
director 107
Rules governing test of dairy apparatus 136, 137

Shorts, analysis of 154
compared with corn meal 159
compared with gluten 161
feeding experiments with 155, 159
Skim-milk, loss of fat in 141
Soda, nitrate of 128
Soil, natural capacity of 109
how exhausted 109
Soils, plant food removed from 114
Station, officers of 103
Station work, plan of 107
Stock feeding, annual cost of 108
improvement in 108
Stoddard churn, test of 142, 143
Sulphate of ammonia 112

Table, composition of grass at various stages of growth 165
plant food removed by crops 114
results of feeding experiments with corn meal, cottonseed meal, and shorts 156, 157
result of plot experiments 120
results of tests with churns 142
showing effect of different forms of nitrogen 127, 128
showing effect of fertilizers on clover 132
showing result of dairy apparatus test 139
showing quality of butter 140
showing yield with manure and chemicals 130
sources of plant food 113
Tables, feeding, how to use them 146–152

Weight of manure per cord 111

REPORT

OF THE

STATE LIBRARIAN

TO THE

NEW HAMPSHIRE LEGISLATURE

FOR THE PERIOD BEGINNING MARCH 1, 1889,
AND ENDING

OCTOBER 1, 1890,

BEING THE TWENTY-FIRST ANNUAL REPORT OF THE LIBRARIAN
UNDER THE ACT APPROVED JULY 3, 1866.

MANCHESTER:
JOHN B. CLARKE, PUBLIC PRINTER.
1890.

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HON. ALBERT S. BATCHELLOR.

Term of office ends October 14, 1892.

HON. GEORGE C. GILMORE.

Term of office ends October 14, 1891.

LIBRARIAN.

ARTHUR R. KIMBALL.

REPORT.

OFFICE OF THE STATE LIBRARIAN,
CONCORD, October 1, 1890.

To the Honorable Senate and House of Representatives, State of New Hampshire:

In accordance with the statute making it my duty to lay before you a statement of the affairs of this department, together "with suggestions for the improvement of the library," I present for your earnest consideration the following report:

The conditions in which this library is now situated, as regards

ROOM,

are not only a hindrance to its growth and future prosperity, but are most destructive to its present usefulness and full of danger to permanent preservation, threatening destruction through the daily chances of fire, and bringing it through crowded volumes and racked bindings. These evils arise from the present attempt to confine a growing collection of books, such as naturally flows into the custody of a commonwealth, within a room which even for the very inception of a library could not be considered very commodious. The original shelving capacity of the present library was intended to be fifteen thousand volumes. Under the pressure of circumstances, this number has been largely increased. It is believed, after patient and searching experiment, that the last available spot into which a book can be forced has been found and utilized; consequently, the array of bookcases has now become an effectual barricade against ready and convenient reference rather than an aid to order and use. The requirements of a reference library structure are twofold. First, it must be a suitable storeroom for books, where they may be shelved in the readiest

manner possible for use and the admittance of accessions. Then, it must command reference or working room, light and commodious, and in all ways fitted to the needs of those who seek its shelves. This library is provided with neither necessities. In both offices it is so crowded and encumbered that it has become comparatively useless in either.

The original shelving capacity of the library was, as before stated, fifteen thousand volumes. The present yearly rate of increase, reckoning pamphlets as ten to the volume, is about two thousand volumes. It will thus be seen that the original limits of shelf-room are filled to overflowing every seven or eight years. This fact has rendered it necessary to remove from the library, from time to time, many thousands of books which are more or less frequently needed for consultation, and which in all similar institutions are regularly provided for with the rest. These books are now stored in committee-rooms and halls. Four rooms, besides the library proper, are occupied in this manner, and it will soon be necessary to make other similar provisions. In addition to rooms thus occupied, four apartments are stored with accumulating state documents and various duplicate matter. Several of these storerooms are dark, and all are unsuited to the purpose. The books of the entire library are at present crowded into nine rooms of the capitol.

It is evident that the question of

EXTENSION OF THE STATE LIBRARY

now presents itself to you with increased urgency. It is not a new need. In the earliest report of the former librarian, it was foreseen and suggested. As early as the year 1881 it became the subject of legislative investigation. Since that period it has come repeatedly before committees, all of which have, with invariable unanimity, agreed upon the necessity of some provision. The feasibility of many plans has thus been tested, and it now conclusively appears that a new building for library and court-room, or an annex to the present quarters, are the only resources available. Under a provision of the Legislature of 1889, a commission has been appointed by the Governor whose duty it will be to lay plans and recommendations before you.

During the period covered by the present report,

VALUABLE ADDITIONS

to the library have been made by the trustees, consisting of publications pertaining to the history and statistics of the State, books relating to kindred and connected subjects elsewhere, of law report sets, and some of the most important of general current publications. Among the last, as of especial importance, may be mentioned Stevens's series of fac-similes of manuscripts relating to the American States during the Revolutionary period, four volumes of which have been received, others being in process of publication. The first-mentioned class of publications, so far as already in print, it is fast becoming impossible to obtain at any price. As to the others, any delay in purchase causes a disproportionate increase in cost. In view of the favorable chances now arising each year for the completion of library sets, I desire to recommend that the annual standing appropriation be maintained on its present basis at least. I would also recommend that the trustees be empowered to purchase, whenever the chances occur, independently of such appropriation, the volumes necessary to fill breaks in sets of

STATE LAWS AND DOCUMENTS,

and the English and Canadian reports. There is a general awakening among the various libraries throughout the country to the importance of this class of records, and, in the general competition that is setting in, it is wise to be among the first. When such sets are once completed, their maintenance will be very inexpensive, since the States are now more particular and thorough in their distribution of the same. The present cost of the English law reports complete is nineteen dollars and fifty cents per year. The current American law reports, with the exception of a few series, are donated by the respective States issuing them. This is almost universally the case with state laws and documents. It is thus evident that the law department of the library, when once perfected, will take care of itself with but trifling outlay.

It is the aim of the New Hampshire Historical Society

TO COLLECT THE MISCELLANEOUS MATTER

relating to the political, religious, biographical, and general history of the State; for which reason the management of the state library previous to the present board, not deeming it good policy

to cripple the meager resources of that time by a duplication of such miscellaneous matter, applied itself more particularly to building up a court library and library of legislative documents. During some periods of the past, the Historical Society has carried on this work of general collection effectively. However, it now conclusively appears that to have this work well and effectively done, without loss or interruption, it must be done by the State. At this period a few thousand dollars, yearly, spent by the State in the accomplishment of this special work, will prove of incalculable value to the future and rescue from loss a large mass of pamphlets and documents which bear important witness to the transactions of the past. Book collectors outside of the State are zealously picking up this matter and carrying it to foreign purchasers. The booksellers even of England and of Germany are gaining very complete collections of the publications relating to New Hampshire, so that in one way or another the local market is becoming exhausted. During the present year a copy of early Province Acts of New Hampshire found a private purchaser in New York. It was the only copy known to exist, and the price paid to a London collector was three hundred dollars. Such purchases are of course beyond the present appropriation of this library, but this is a matter which legislative action should speedily remedy by a generous provision for the purchase of this particular class of books wherever and whenever they may be found for sale.

As an important event in the interests of the State relating to libraries, as well as one that drew general notice and appreciative attention, the meeting of the

AMERICAN LIBRARY ASSOCIATION

at Fabyans, N. H., September 9–13, should not pass without a few words here regarding it. This was the twelfth annual meeting of the association, held at various places in the United States and Canada, and was considered the most successful of any since its organization. Only four libraries of this State, two of these situated at the capital, were represented at the meeting ; but the many expressions elicited by the event from various parts of the State showed conclusively that interest in the matters to be transacted there was widespread. Examination of the results of the

few years of the association's existence leads not only to conviction of the practical utility of its achievements, but gives an assurance of the vast importance of its aims to the future. Its purpose is the consideration and discussion of all the problems, great and little, which afflict the struggling library, and in becoming older it becomes each year stronger and abler to solve them. It seeks to promote all the larger questions of the theory of the library, the policy of the library, the relation of the library to State and individual, and descends thence through the entire scale of library economics to the minutiæ of technical detail. It collates experience and is fast transforming, through its influence, library-experiment into library-science.

Aside from the profit gained from a comparison of methods by a body of librarians and directors drawn from every part of the country, the association offers advantages of co-operation and combined power which, if carried to the ends they suggest, will open a new epoch in the history of the library world.

The New York State Legislature has adopted much that appears in the principles of the association, and has carried much of those precepts, with the added force of organic law, into her institutions, to admirable results. Hence, it seems particularly fitting at this time that in your proceedings the consideration of this matter should find a place. The gist of the plan, as embodied in the New York system, is that the libraries of the State be constituted a part of the public educational system, as the true "people's university." To this end, all the scattered local libraries, which otherwise are likely to pass a lingering existence, unconscious of their true mission and newest methods, are brought into one active, connected library-system, in which the state library assumes duties aand relations analogous to those of the state superintendent of public instruction in the common school system. An important step in pursuance of such a plan would be the establishment of a central agency which should act as a bureau of information and as a

STATE CLEARING-HOUSE

for the collection and distribution of books and documents throughout the State, not necessarily involving any expense for the acquirement of books, but merely an authorized medium of *circu-*

lation. Such an agency, too, would be fitted to utilize the results of the work carried on by the national association. It cannot be doubted that such unity of method and design would secure a prosperity hitherto unexperienced by our local libraries. A broad, systematic method of interchange would be open between them. Added to that, the knowledge and experience of a nation's librarians would be speedily available to them in all its newest phases; and if knowledge and experience could not take the place of lacking resources, yet it would employ that which does exist to its most effective ends.

THE NEW HAMPSHIRE LIBRARY ASSOCIATION,

which held its first meeting for temporary organization at the time and place of the national association meeting, has the distinction of being the first incorporated society of the kind in the country. If the association meets the encouragement and support which it has reason to expect, it will maintain New Hampshire among the foremost as she was among the earliest patrons of library progress.

THE STATE LIBRARY SECTION

of the national association deserves the hearty support of every library official who has the interests of his State at heart. Its objects are the promotion of exchange between States, the securing of completeness and system in the same, of uniformity and method in the publication of state documents, and, in general, all ends calculated to forward the cause of the state library. A list of officers of the section, together with the recommendations of the association for state and national legislation, will be found in the appendix to this report.

In connection with the general subject of improvements in public printed records the matter of

CONTINUOUS PAGINATION

suggests itself as a most useful aid to consultation and reference. Several private organizations of the State have adopted this improvement in printing their proceedings, and it is to be greatly desired that all others adopt a similar plan. I desire to recommend that the printer employ this system of pagination in all state documents to which it will conveniently apply, so that

these records may be preserved in the state library in continuously paged volumes of about five hundred pages each. If preferred, this method of pagination may be used in connection with the other, the running number at the top, the other at the bottom of page. It is also desirable that some system of reference be adopted in the table of contents of the annual reports, such as will more readily direct one to any required report therein. The references could easily be made by the use of figures, each separate report to have its own number, which should appear in heavy-faced type at the top of each page. It would be well, when two or more volumes occur in a year, to briefly note the contents of each on the backs of the volumes, as is the practice in several States. The journals of the Senate and House, also, should, when bound together, be preceded by a new title page.

I now proceed to the

DETAILED STATEMENT

of the affairs of this department since the last report, March 1, 1889, to date: In the acknowledgment of receipts I have taken no note of such volumes of New Hampshire state publications as are in the constructive possession, only, of the library; since in the present overcrowded conditions, these books are packed in vaults and in the basement of the office of the secretary of state in such a manner as would make an enumeration and record impracticable. If the number of volumes accruing yearly from this source were added to the receipts of the library, the total number as it appears below would be greatly enlarged.

The vouchers for all money expended under the appropriation acts are filed with the state treasurer. Reference is therefore made to his report for the financial statement.

I have received from sale of books	$171.85
Paid for books and incidentals, as per account . .	141.00
Balance carried to new account	$30.85

Which is deposited at bank subject to the order of the librarian.

PURCHASES. *

American State Reports, vols. 4–13	10
American and English Railroad Cases, vols. 35–41. Index to vols. 1–35	8
American and English Corporation Cases, vols. 22–28. Digest 11–26	8
United States Reports (Supreme Court), vols. 128–135	8
United States Digest (new series), vol. 19 (1888)	1
New York Superior Court Reports, vols. 56, 57	2
Illinois Appeal Court Reports, vols. 26–30	5
New Cases — Abbott, vols. 22, 23, 24	3
American and English Encyclopedia of Law, vols. 8–11	4
Court of Claims Reports, vols. 23, 24	2
Montgomery County (Penn.) Reports, vols. 4, 5	2
Mackey's Report, vol. 6	1
English State Trials, vols. 1, 2 (new series)	2
Chancery Cases — Gilbert	1
Justice and Parish Officer — Burns	6
Important English Statutes	1
Writings of George Washington, vols. 1–6	6
Charging the Jury — Thompson	1
American Commonwealth — Bryce	2
Battles and Leaders of the Civil War	4
Cyclopedia of American Biography, vol. 6	1
Memorial Addresses on William Pitt Fessenden	1
Weeks Genealogy	1
American Ancestry, vols. 4, 5	2
Irish Pedigrees, vols. 1, 2	2
The Australian Ballot System — Wigmore	1
Historical Relics of the White Mountains — Spaulding	1
English Vice-Chancellor's Reports, as follows:	
Drewry's Reports	4
Kay and Johnson's Reports	4
Johnson's Reports	1
Johnson and Hemming's Reports	2

* The first column of numbers represents number of volumes received; the second, the number of pamphlets, maps, and sheets.

English Railway Cases — Beavan and Walford . .	1	
Louisiana Criminal Digest — Knobloch . . .	1	
Annual English Digest, 1888, 1889 — Mews . .	2	
History of Christian Names — Yonge . . .	1	
Life and Public Service of Salmon P. Chase — Schucker	1	
English Common Law Reports (uncondensed), vols. 20, 27, 32, 34, 38	5	
Law of Torts — Pollock (paper covers) . . .	1	
Law of Contracts — Pollock	1	
List of Emigrants to America, 1600–1700 . .	1	
Narrative and Critical History of America, vols. 1, 8	2	
Treatise on Equity — Adams	1	
History of the Celebration of the 100th Anniversary of the Promulgation of the Constitution of the United States	30	
Sermon Preached at Epsom at the Funeral of the Hon. John McClary — Curtis		1
Election Sermon June 3, 1824 — Tyler . . .		1
New Year's Sermon Delivered in Deerfield, N. H., January, 1822 — Wells		1
		1
Sermon at Exeter, 1820 — Rowland . . .		1
Sermon at Installation of Rev. E. P. Sperry — French		1
Sermon at Concord, June 3, 1818 — Brown . .		1
Sermon at Brentwood — Aiken		1
Sermon at Andover, Mass. — Church . . .		1
American Ancestry, vols. 1, 2, 3	3	
A View of the Conduct of the Executive in the Foreign Affairs of the United States connected with the Mission of the French Republic during the years 1794–95–96 — Monroe	1	
The American Digest, 1888	1	
New Hampshire Register, 1889	1	
Memoirs of John A. Dix	2	
Loyalists of America — Sabine	2	
Butler in New Orleans	1	
Life of Horace Greeley — Parton	1	

Rise and Fall of the Slave Power in America — Wilson 3
Life and Public Services of Henry Wilson — Nason and Russell 1
Men and Measures of Half a Century — McCulloch . 1
Life of Washington — Irving 5
Methodist Conference Minutes, 1829–39, vol. 2 . 1
Hubert H. Bancroft's Historical Works, vols. 16, 17, 24, 25, 26, 31 6
Regimental Losses in the American Civil War . . 1
Tilden's Public Writings and Speeches . . . 2
Walker's History Second Army Corps . . . 1
Autobiography of Amos Kendall 1
The Fight for Missouri — Snead 1
The Story of New York City — Todd . . . 1
The Story of the City of Washington — Todd . . 1
Gettysburg to the Rapidan — Humphreys . . . 1
Diary and Letters of Gouverneur Morris — Morris . 2
Brown's Biographical Sketches of the Legislature of 1889–90 1
Writings of Levi Woodbury 3
White Mountain Guide-Book — Bradlee . . . 1
White Mountain Guide-Book — Eastman . . . 1
White Mountain Guide-Book — Boardman . . 1
White Mountain Guide-Book — Tripp and Osgood . 1
Provincial Papers of N. H., vols. 1, 2 . . . 2
The Century Dictionary 3
Railway and Canal Traffic Cases, vol. 6 . . . 1
Impressions of Russia — Brandes 1
The Winning of the West — Roosevelt . . . 2
The Fall of New France — Hart 1
Colonial New York — Schuyler 2
Papers of the American Historical Association . . 2
Universal Cyclopedia — Johnson 8
Littleton Directory, 1889–90 1
Aalsund to Tetuan — Corning 1
Delaware County Reports, vol. 3 1
Equity Practice in the United States Circuit Courts — Shiras 1

Life of Gannett	1	
Life of Hosea Ballou	1	
History of Universalism in America — Eddy	2	
Universalist Registers, 1848, 1850, 1860, 1861, 1863, 1867–89 (except 1880)	27	
Railway Manual, 1889 — Poor	1	
Federal Reporter, vols. 37, 38, 39, 40, 41	5	
Atlantic Reporter, vols. 17, 18, 19	3	
Northeastern Reporter, vols. 21, 22, 23	3	
Northwestern Reporter, vols. 41, 42, 43, 44	4	
Supreme Court Reporter, vol. 9	1	
Southwestern Reporter, vols. 11, 12	2	
Southeastern Reporter, vols. 9, 10	2	
Southern Reporter, vol. 6	1	
The American Digest, 1889	1	
Pacific Reporter, vols. 22, 23	2	
Hemming and Miller's Reports	2	
Railway and Canal Cases	7	
New Hampshire Business Directory, 1877, 1879, 1885	3	
Life of Stephen A. Douglas	1	
Life of James W. Grimes	1	
Life of James Buchanan	2	
Memoir of J. L. Petigree	1	
History of Journalism	1	
Civil Service in Great Britain	1	
The Hessians in the Revolution	1	
Speeches and Addresses of H. W. Davis	1	
Military Operations of General Beauregard	2	
Congregationalism — Dexter	1	
Works of Daniel Webster	6	
Wentworth Papers	1	
American Statesmen Series: Life of Benjamin Franklin	1	
County Reports: Hillsborough, 1846 – 75		25
Red Man and White Man — Ellis	1	
Newfoundland — Hatton and Harvey	1	
History of the United States — Bancroft	6	
First Church in Dedham	1	

Dedham Records, vol. 2 1
Local Constitutional History of the United States . 1
Pictorial History of the Civil War — Harper . . 2
Life of S. P. Chase — Warden 1
Law Reports: Crown Cases Reserved, vol. 1 . . 1
System of Sewerage — Waring 1
Constitutional Law — Hare 2
War with Crime — Baker 1
Bench and Bar of England — Robinson . . . 1
Addresses and Lectures — Choate 1
Agricultural Practice — Wrightson 1
Almanac, 1889 — Whittaker 1
Law of Banks and Banking — Morse . . . 2
American Law of Administration — Woener . . 2
Railway Rates — Hunter 1
Law of Possessions — Pollock and Wright . . 1
Law Dictionary — Anderson 1
Concurrent Jurisdiction — Holt 1
Digest of Patent Cases — Simonds 1
Law of Fraud — Bigelow 1
Law of Trials — Thompson 2
Early History of Institutions — Maine . . . 1
Early Law and Custom — Maine 1
Ancient Law — Maine 1
Village Communities — Maine 1
International Law — Maine 1
Privy Council — Dicey 1
Law and Custom of the Constitution — Anson . . 1
Year-Books, Edw. I., 21, 22; 33, 35; Edw. III., 11, 12; 14 4
Governance of England — Fortescue . . . 1
Law of Tax Titles — Blackwell 2
Principles of Partnership — Parsons 1
Journal of the Royal Society of Agriculture, 1885–88 (8 parts, paper covers) 8
Report of Commissioners to Revise the Statutes of Maine 1
Christus Judex 1
History of the Freewill Baptists 1

Sermons of Rev. John K. Lord	1	
Minutes of Methodist Conferences, 1773–1828 . .	1	
District of Columbia Reports, vol. 6	1	
American Almanacs — Spofford, 1878, 1879, 1880, 1881, 1882, 1883, 1885, 1887	8	
American Bar Association Reports, 1st to 6th Annual Meetings	6	
College Addresses		8
The New Hampshire Journal of Medicine, vol. 1–7 .	3	
The New Hampshire Journal of Medicine, vol. 7, nos. 4, 5, 9, 10, 11, 12; vol. 8, nos. 1–12 . . .		18
Memorial of Methodism — Stevens	1	
Memorial Addresses in the United States Congress on Henry Wilson, Fernando Wood, and Zachariah Chandler	3	
Twenty Years among the Mexicans	1	
Equity Digest — Chitty, vols. 8, 9	2	
Pennsylvania County Reports, vol. 6	1	
A Sketch of the Germanic Constitution — Turner .	1	
Constitutional History as seen in American Law .	1	
American Literature, 1607–1885 — Richardson . .	2	
Law of the Constitution — Dicey	1	
Alumni Oxonienses, 1715–1886	4	
Gray's Inn Admission Register, 1521–1889 . .	1	
Financial History of the United States, 1789–1885 .	2	
Life and Letters of Admiral Farragut	1	
Manual of Historical Literature — Adams . .	1	
Early History of New England — White	1	
Minutes of Freewill Baptist Conferences, vols. 1, 2 .	2	
Abridgment of Cases at Common Law — Petersdorff	5	
Law of Crimes — Russell	2	
Law of Contracts — Chitty	1	
Treatise on Equity — Fontblanque	1	
Treatise on Evidence — Phillipps	5	
Equity Digest	3	
Chancery Practice — Maddock	2	
Law of Evidence — Starkie	3	
Law Dictionary — Jacobs	6	

Equity Practice — Curtis 1
A Treatise upon the Law of Fraud as Administered in Courts of Equity — Hovenden 1
Treatise upon Real Action — Jackson . . . 1
Law of Insurance — Phillips 2
Miscellaneous Speeches 2
Northern Railroad *vs.* Concord Railroad: Evidence (N. H.), 1870 1
A Treatise on the Trustee Process — Cushing . . 1
Law of Mortgages — Hilliard 2
Coke's Institute — Thomas 3
Law of Master and Servant — Smith . . . 1
Law of Contracts — Chipman 1
Treatise on Real Actions — Stearns 1
Treatise on the Law of Ways — Woolych . . 1
Life of Washington — Lodge 2
Dictionnaire Genealogique des Familles Canadiennes, vols. 6, 7 (paper covers) 2
Memoirs of W. T. Sherman 2
Tuttle Family 2
The Historical and Genealogical Researches of Merrimack Valley 1
History of Methodism — Stevens 4
Upton Memorial 1
Richardson Memorial 1
Fletcher Genealogy 1
Cushman Genealogy 1
Descendants of George Little, of Newbury, Mass. . 1
History of the Guild Family 1
Memoirs of the Protestant Episcopal Church — White 1
History of the Baptist Denomination in America — Benedict 1
Congregationalism as seen in its Literature — Dexter 1
The Theory of National Existence — Hurd . . 1
Thirty Years in the United States Senate — Benton . 2
Life of Paul Jones 2
The Potomac and the Rapidan — Quint . . . 1
Genealogy of the Allen Family 1

Ricker Family Record		1
Life of Luther C. Ladd		1
Annual Address of the President of the Gynecological Society		1
A Letter to the Alumni of Dartmouth College on its Hundredth Anniversary — Lord		1
The First Half-Century of Dartmouth College — Crosby		1
Dartmouth Centennial, 1869 (paper cover)	1	
Dedication of Soldiers' Monument at Claremont, October 19, 1869	1	
First Bishop of New Hampshire: In Memoriam	1	
Guide-Book of the White Mountains (1853): Atlantic & St. Lawrence, etc., Railroads	1	
Law of Non-Contract — Bishop	1	
Law of Police Officers and Coroners	1	
Roll Map of Sullivan County, New Hampshire		1
Lithographic Views of New Hampshire Towns (39 sheets)		39
American Almanac, 1884, 1886, 1889	3	
The Origin and Growth of the English Constitution — Taylor	1	
Butterflies of the Eastern United States and Canada	3	
Methodist Episcopal Church: General Conference Journal, 1888	1	
Methodist Episcopal Church: Fall Minutes, 1888 (paper cover)	1	
Methodist Episcopal Church: Spring Minutes, 1889 (paper cover)	1	
Journal of Proceedings of the Protestant Episcopal Church in the Diocese of New Hampshire, 1847–88 (except 1851)		41
The New Eldorado	1	
Life of General Lafayette	2	
Martin Van Buren — Bancroft	1	
Revolution in South Carolina — Ramsey	2	
Year-Book, Edward III., 12, 13	1	
Cases on Partnership — Ames	1	

Fire Insurance Cases — Bennett 5
Life and Accident Insurance Cases — Bigelow . . 5
Leading Cases in Equity — White and Tudor . . 4
Property Cases — Gray 3
Cases on Quasi-Contracts — Keener 2
Montgomery County (Penn.) Reports, vols. 1, 2 . 2
Luzerne County (Penn.) Legal Register, vols. 1–3 . 3
Notes on the Revised Statutes of the United States — Gould and Tucker 1
Forms in Conveyancing — Jones 1
American Precedents in Personal and Real Actions — Oliver 1
Law of Liens — Jones 2
The Common Law — Holmes 1
History of Greece — Duruy (sections 1–3) . . 3
History of the English Law — Reeves . . . 5
Huguenot Emigration to America — Baird . . 2
Life of R. E. Lee — Cooke 1
The Critical Period of American History — Fiske . 1
The Beginnings of New England — Fiske . . 1
Olden Times Music — Brooks 1
Gems of American Scenery: White Mountains . 1
Works of John C. Calhoun 6
Biography of Stonewall Jackson — Cooke . . 1
Reviewers Reviewed — Stephens 1
Historical Works — Parkman, 10 vols., as follows: . 10
- Conspiracy of Pontiac, vols. 1, 2.
- France in the New World.
- Frontenac and New France.
- Jesuits in North America.
- La Salle and the Great Northwest.
- Montcalm and Wolfe, vols. 1, 2.
- Old Regime in Canada.
- Oregon Trail.

The Olden Time Series: Gleanings from Old Newspapers 6
White Mountain Guide — Pickering 1
Colonial Times on Buzzard's Bay — Bliss . . . 1

Roll Map of Carroll County, N. H. 1860 (sheet)		1
The Rise and Fall of the Confederate Government — Davis	2	
Annals of the American Pulpit — Sprague, vols. 3–9	7	
Roll Map of Rockingham County, N. H. (sheet)		1
Jefferson's Administration — Adams	2	
The Russians at the Gates of Herat — Marvin	1	
Army Life in Russia — Greene	1	
The Provinces of Rome — Mommsen	2	
Decisive Battles of India — Halleson	1	
The Viking Age — Du Chaillu	2	
Papers of the American Historical Association, vol. 3	1	
War of the Succession in Spain — Parnell	1	
The Old Northwest — Hinsdale	1	
The Life of General Thomas — Van Horne	1	
The Middle Kingdom — Williams	2	
Peninsular Campaign — Napier	1	
American Diplomacy — Schuyler	1	
Protestant Episcopal Almanac and Parochial List, 1889		1
Roman Law and the Law of England — Scrutton	1	
Advance and Retreat — Hood	1	
Essays in the Constitutional History of the United States	1	
Souvenir of Concord, N. H.	1	
Memoirs of George T. Day	1	
Centennial Record of Freewill Baptists, 1780–1880	1	
Military Operations of General Beauregard	2	
The Principal Fisheries of American Seas — Sabine	1	
Discourse to Commemorate the Discovery of America — Belknap	1	
The Foresters, 1796	1	
History of Hancock, N. H. — Hayward	1	
Proceedings of the Seventh Baptist Congress, 1888 (paper covers)	1	
Granite Monthly, vol. 2 (N. S.)	1	
Incidents of the Civil War — Porter	1	
The American Railway	1	
Younge and Collyer's Reports	4	

New England Sheriffs and Constables — Hitchcock	1	
Concord City Directory, 1889–90	1	
Japan — Rein	1	
The Industries of Japan — Rein	1	
Reports in Chancery, 1736	1	
Placita Anglo-Normannica — Bigelow	1	
Library Journal, vol. 15, 1890 (two copies in numbers)	2	
Railroad Manual, 1890 — Poor	1	
Minutes of Annual Conference of the Methodist Episcopal church (N. H.), 1840, 1842, 1844–45, 1849		4
Freewill Baptist Registers, 1825 to 1890		65
North American Review, vols. 126, 128, 129, 130, 131, 132, 133	7	
Oration on the Fourth of July, 1865 — Brown		1
New Hampshire Antiquarian Collection, nos. 2, 3		2
New Hampshire Historical Collection, vol. 7	1	
Probate Directory, Concord, N. H., 1829	1	
Indian Narratives, 1854	1	
Memoir of Thomas Chittenden — Chipman	1	
English Reader — Murray, 1823	1	
American Law Register, 1853		1
New York Historical Society's Collection, 1868–84	17	
The Sewall Papers, 1674–1729 (Massachusetts Historical Collections)	3	
British Armorials — Papworth	1	
Genealogical Dictionary of New England — Savege	4	
Laws of New Hampshire, 1858, 1863, 1869, 1871, 1877 (paper covers)	5	
Croke's Reports	4	
Calthrop's Reports	1	
Plowden's Reports	2	
Levinz's Reports	3	
Strange's Reports	2	
Douglas's Reports	4	
Cababe and Ellis's Reports	1	
Dowling and Ryland's Reports	9	
Neville and Manning's Reports	6	
Marshall's Reports	2	

Moore's Reports	12
Moore and Payne's Reports	5
Moore and Scott's Reports	4
Scott's Reports	8
Scott's New Reports	8
Hurlstone and Walmesley's Reports	1
Price's Notes	1
Wilson's Reports (Exch. Eq.)	1
Carrington and Kirwan's Reports	3
Swabey and Tristram's Reports	4
Searle and Smith's Reports	1
Manning and Ryland's Reports	3
New Session Cases	4
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Journals of Senate and Assembly, 1889 . . . 3

Manual, 1890 1

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Specifications and Drawings of Patents, Monthly, March, 1888, to August, 1889 . . .	36	

Official Gazette, vols. 47, 48	2	
Congressional Documents, 47th Congress	11	
" " 48th "	2	
" " 49th "	104	
" " 50th "	90	
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Amherst, " " "		2
Dunbarton, " " "		2
Rindge, " " "		2

Fremont,	years ending	March,	1889, and 1890	2
Milford,	"	"	"	2
South Hampton,	"	"	"	2
Wolfeborough,	"	"	"	2
Antrim,	"	"	"	2
Hancock,	"	"	"	2
Gilsum,	"	"	"	2
Orange,	"	"	"	2
Gilmanton,	"	"	"	2
Hollis,	"	"	"	2
Rye,	"	"	"	2
New Boston,	"	"	"	2
Acworth,	"	"	"	2
Chesterfield,	"	"	"	2
Madison,	"	"	"	2
Pelham,	"	"	"	2
Milan,	"	"	"	2
Colebrook,	"	"	"	4
Hooksett,	"	"	"	2
Hanover,	"	"	"	2
Henniker,	"	"	"	2
Merrimack,	"	"	"	2
Lyndeborough,	"	"	"	2
Harrisville,	"	"	"	2
Orford,	"	"	"	2
Hebron,	"	"	"	2
Newbury,	"	"	"	2
Unity,	"	"	"	2
Boscawen,	"	"	"	2
Bedford,	"	"	"	2
Jaffrey,	"	"	"	2
Bridgewater,	"	"	"	2
Wilmot,	"	"	"	2
Salem,	"	"	"	2
Lebanon,	"	"	"	2
Webster,	"	"	"	2
Hopkinton,	"	"	"	2
Mason,	"	"	"	2

Derry,	years ending March, 1889, and 1890	2
Hudson,	" " "	2
Hampton Falls,	" " "	2
Chatham,	" " "	2
Windham,	" " "	2
Sunapee,	" " "	2
Newton,	" " "	2
Cornish,	" " "	2
Marlow,	" " "	2
New Durham,	" " "	2
Temple,	" " "	2
Grantham,	" " "	2
Wilton,	" " "	2
Groton,	" " "	2
Nottingham,	" " "	2
Meredith,	" " "	2
Wentworth,	" " "	2
Ashland,	" " "	2
Newmarket,	" " "	2
Campton,	" " "	2
Allenstown,	" " "	2
Alstead,	" " "	2
Chichester,	" " "	2
Lempster,	" " "	2
Eaton,	" " "	2
Nelson,	" " "	2
Deering,	" " "	2
Greenville,	" " "	2
Belmont,	" " "	2
Alexandria,	" " "	2
Bristol,	" " "	2
Pembroke,	" " "	2
Warner,	" " "	2
Brookline,	" " "	2
Deerfield,	" " "	2
Tamworth,	year ending March, 1889 . .	1
Sandwich,	" " " . .	1
Enfield,	" " " . .	1
New Hampton,	" " " . .	1

New Ipswich,	year ending	March,	1889	. .	1
Alton,	"	"	"	. .	1
Northumberland,	"	"	"	. .	2
Bow,	"	"	"	. .	1
Andover,	"	"	"	. .	1
Moultonborough,	"	"	"	. .	1
Canterbury,	"	"	"	. .	1
Bethlehem,	"	"	"	. .	1
Weare,	"	"	"	. .	1
Hill,	"	"	"	. .	1
Madbury,	"	"	"	. .	1
Pittsfield,	"	"	"	. .	1
Strafford,	"	"	"	. .	1
Sanbornton,	"	"	"	. .	1
Woodstock,	"	"	"	. .	1
Loudon,	"	"	"	. .	1
Londonderry	"	"	"	. .	1
Hampstead,	"	"	"	. .	1
Lyme,	"	"	"	. .	1
Barnstead,	"	"	"	. .	1
Goffstown,	"	"	"	. .	1
Rumney,	"	"	"	. .	1
Hinsdale,	"	"	"	. .	1
Springfield,	"	"	"	. .	1
Hillsborough,	"	"	"	. .	1
Fitzwilliam,	"	"	"	. .	1
Greenland,	"	"	"	. .	1
Marlborough,	"	"	"	. .	1
Plaistow,	"	"	"	. .	1
Landaff,	"	"	"	. .	1
Candia,	"	"	"	. .	1
Gorham,	"	"	"	. .	1
Raymond,	"	"	"	. .	1
Plainfield,	"	"	"	. .	1
Gilford,	"	"	"	. .	2
Washington,	"	"	"	. .	1
Sandown,	"	"	"	. .	1
Middleton,	"	"	"	. .	1

Bennington,	year ending March, 1889 . .	1
Warren,	" " " . .	1
Epsom,	" " " . .	1
Lancaster,	" " " . .	1
Haverhill,	" " " . .	1
Thornton,	" " " . .	1
Jefferson,	" " " . .	1
Sullivan,	" " " . .	1
Ossipee,	" " " . .	2
Stratham,	" " " . .	1
Milton,	" " " . .	1
Francestown,	" " " . .	1
Rollinsford,	" " " . .	1
Alton,	year ending March, 1888 . .	1
Rindge,	" " " . .	1
Fremont,	" " " . .	1
South Hampton,	" " " . .	1

And School Reports as follows:

Rindge, years ending March, 1888, 1889, 1890 .	3
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Third Annual Fair Grafton and Coös Grange		1
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Reports of the Selectmen, etc., 1855, 1855–56, 1859, 1861, 1868–71, 1873–77, 1879, 1880, 1881		16

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Bowdoin Triennial College Catalogues, 1834–81		14
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Bowdoin in the War	1	
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Annual Report of the Maine Central Railroad Company, 1887		1
Annual Report of the Fitchburg Railroad Company, 1889		1
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Same, 1838, 1851–52, 1852–53, 1854, 1871–72 1872–73, 1873–74, 1875–76, 1876–77, 1877–78, 1879–88 (19th to 36th, except 22d and 26th) 20
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Kensington, " " . .		1
Langdon, " " . .		1
New Ipswich, " " . .		1
Northfield, " " . .		1
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Annual City Reports, 1889 (paper covers) .	1	
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Historical Sketch of the New Hampshire Asylum for the Insane		2
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Catalogi Senatus Academici, 1821, 1822, 1825, 1828, 1831, 1833, 1834, 1837, 1840, 1843, 1846, 1849, 1852, 1855, 1858, 1861, 1864, 1867 . 18
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Annual Announcement for 1890–91: Department of Law	1	
From City of Portsmouth:		
City Directories, 1850, 1857, 1860–61 . .	3	
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Recollections of Charles J. Ingersoll . .	1	
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History of the Centennial Celebration of the Promulgation of the Constitution of the United States 2
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New Hampshire Supreme Court Reports, vols. 54, 56–62, 64 9
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Revolutionary Rolls, vols. 1–4 4
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Provincial Laws, 1696–1725 (reprint) . . 1
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New Hampshire State Papers, vol. 17 . . 1

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History of the Centennial Celebration of the Promulgation of the Constitution of the United States 2
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To A. D. Ayling, for the Adjutant-General's Office:
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* Laws of 1889, chapter 149.

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Acquired by purchase	1328	499
Acquired by regular receipts (interstate, national, and Canadian exchange)	1143	351
Acquired otherwise (special exchange and donation)	243	1562
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Respectfully submitted.

ARTHUR R. KIMBALL,

State Librarian.

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APPENDIX.

NEW HAMPSHIRE

OFFICIAL PUBLICATIONS

1889-1890.

A LIST OF OFFICIAL PUBLICATIONS

ISSUED SINCE THE LAST REPORT OF THE LIBRARIAN.

Laws of the State of New Hampshire, passed June session, 1889. Manchester, N. H.: John B. Clarke, Public Printer, 1889; full law sheep, also in paper covers; one volume, 8vo., pp. 288.

Journal of the Honorable Senate of the State of New Hampshire, June session, 1889 (June 5, 1889, to August 16, 1889), pp. 337; Journal of the House of Representatives, June session, 1889, pp. 997; indexes to each at end of volume. Manchester: John B. Clarke, Public Printer, 1889. Half law sheep and boards, also in paper covers; one volume, 8vo., pp. 337 and 997.

Index to the Journals of the House of Representatives, Province of New Hampshire, in the office of the Secretary of State, 1711–75. Manchester, N. H.: John B. Clarke, Public Printer, 1890. One volume, 8vo., full law sheep, pp. 2 and 409.

Message of His Excellency David H. Goodell, Governor of New Hampshire, to the two branches of the Legislature, June session, 1889; pp. 17.

Report of the State Librarian for the year ending March 1, 1889; pp. 44. L.*

Report (20th annual) of the Insurance Commissioner for the year ending December 31, 1888; pp. xxviii. and 381. Ex.

Report (45th annual) of the Railroad Commissioners for the year ending May, 1889; map, pp. 300, and appendix, 178. L.

* L denotes that the report is made to the Legislature; Ex., to the Governor and Council.

Report of the Fish and Game Commissioners for the year ending June 1, 1888; pp. 11. Ex.

Report of the Fish and Game Commissioners for the year ending June 1, 1889; pp. 50. Ex.

Report (18th annual) of the Board of Agriculture for the year ending May 1, 1889; pp. 408. Ex.

Report of the Adjutant-General for the year ending May 31, 1889; pp. 90 [1]. Ex.

Report of the Officers of the State Asylum for the Insane for the year ending April, 1889; 3 plates and pp. 82. Ex.

Report of the Bank Commissioners for the year ending May 1, 1889; pp. 504. Ex.

Report (44th annual) of the State Treasurer for the year ending May 31, 1889; pp. 78. L.

Report of the Officers of the State Prison for the year ending April 30, 1889; pp. 23 [1]. Ex.

Report of the Officers of the Industrial School for the year ending March 31, 1889; pp. 80. Ex.

Report of the Trustees of the State Normal School for the year ending May 1, 1889; pp. 65. L.

Report (18th) of the Trustees of the College of Agriculture for the period beginning April 1, 1887, and ending April 1, 1889. Part I., 1 plate and pp. 72; Part II., 1 plate and pp. 104. L.

Report of the Superintendent of Public Instruction for the year ending June, 1889; pp. 370. Ex.

Report (8th annual) relating to the Registration and Return of Births, Marriages, Divorces, and Deaths in New Hampshire for the year 1887. Volume 5, new series, pp. 248. Ex.

Valuation and Taxation in New Hampshire for the year 1888; pp. 47. Compiled by the Secretary of the State Board of Equalization.

The foregoingr eports and documents are all similarly published,— Manchester: John B. Clarke, Public Printer, 1889. They are bound in paper covers, a portion also in cloth. Bound together, but retaining their separate pagination, they constitute the

Annual Reports, State of New Hampshire, 1889. Manchester: John B. Clarke, Public Printer, 1889. Half law sheep and boards, also in paper covers. Two volumes, 8vo.; volume I., pp. =1584; volume II., pp. =1600.

"Secure a Home in New Hampshire, where Comfort, Health, and Prosperity Abound." Manchester: John B. Clarke, Public Printer, 1890. A Descriptive List of the Vacant Farms in the Towns of New Hampshire, and List of Summer Hotels, Boarding Houses, etc. Issued by the Commissioner of Agriculture and Immigration. Folding map, illust., 8vo., paper covers, one volume, pp. 103.

Publication of Early State and Province Papers. Report of the Committee of the Executive Council to His Excellency Charles H. Sawyer, Governor of New Hampshire, 1887–89. By Councilors A. S. Batchellor and John B. Smith, Concord, N. H. Republican Press Association, 1890. Pamphlet, 8vo., pp. 12.

The New Hampshire Manual of Useful Information, published by authority of the Legislature, by the Secretary of State, No. 1, 1889. Manchester: John B. Clarke, Public Printer, 1889. Red cloth, one volume, 12mo., pp. 450.

The New Hampshire Reports — Cases determined in the Supreme Court of New Hampshire, June Law Term, 1882, December Law Term, 1882, June Law Term, 1883; William S. Ladd, Reporter. Volume 62 (volumes 63 and 64 are of prior date of publication). Concord: Published by Josiah B. Sanborn, 1889. One volume, 8vo., full law-sheet, pp. x. and 732.

State and Provincial Papers, volume 17, being the fourth volume of the Revolutionary War Rolls. Part I., Rolls and Docu-

ments relating to the Soldiers in the Revolutionary War; Part II., Miscellaneous Provincial Papers from 1629 to 1725. Compiled and edited by Isaac W. Hammond. Manchester, N. H.: John B. Clarke, Public Printer, 1889. Black cloth, one volume, 8vo., pp. xxiv. and 819.

Miscellaneous Provincial and State Papers, 1725–1800, volume 18, includes all the "Belknap Papers" not previously printed in vols. 4, 5, and 6 of this series; with Appendix containing documents relating to Joseph Wait, in the Revolutionary War, and to the early church affairs of Portsmouth, N. H. Compiled and edited by Isaac W. Hammond. Manchester, N. H.: John B. Clarke, Public Printer, 1890. Black cloth, one volume, 8vo., pp. xxix. and 982.

LIST OF REPORTS OF DEPARTMENTS,

STATE OF NEW HAMPSHIRE,

AND OTHER DOCUMENTAL MATTER, AS FOUND IN APPENDICES OF LEGISLATIVE JOURNALS, AND SUBSEQUENTLY IN THE "ANNUAL REPORTS."

Contents of Appendices to New Hampshire Legislative Journals, from 1822 to 1870.

[Those references marked with a * will be found in the Senate Journal Appendix; all other references will be found in the House Journal Appendix.]

		PAGE.
1822.	Acts passed by the Legislature	379
	Resolves of a public nature	383
	List of Representatives	385
	Public Hearings	392
	Petitions postponed	392
	Report of the Adjutant and Inspector General*	189
	Report of the Warden of the State Prison*	196
	Acts and Public Resolves*	205
1823.	Inspection Returns of the State Militia	295
	Bank Statement	300
	Treasury Estimates	301
	Acts passed by the Legislature	304
	Report of the Committee on Elections	309
	Bills postponed to the next Session	318
	Public Hearings before the Committee on Incorporations	319
	An Alphabetical List of Towns with name of Representative returned	319
	Inspection Returns of the State Militia*	183
	Bank Statement*	188
	Treasury Estimates*	189

Acts passed by the Legislature * 192
Resolves of a public nature * 196
Rules of the Senate * 197

1824. Acts passed by the Legislature 173
Adjutant-General's Statement 181
Bank Statement 182
Schedule in addition to Report of the Warden of the State Prison 183
Rules of the Senate and House 184
An Alphabetical List of Towns with names of Representatives returned 185
Acts passed by the Legislature * 91
Statement of the Warden of the State Prison * . 95
Report of the Adjutant-General * 100
Rules of the Senate * 103
Rules of the Senate and House * 106
Report of the Commissary-General * 108
Bank Statement * 110

ADJOURNED SESSION.

Acts passed by the Legislature 325
Resolves passed by the Legislature 329
Letter relative to Claims againt the United States 330
Letter from the Warden of the State Prison, etc. 334
Schedule respecting Settlers on the Public Lands 338
Report of the Committee on the subject of the Public Lands 341
Report of the Treasurer 350
Subjects postponed 353
An Alphabetical List of Towns with names of Representatives returned 355
Acts passed by the Legislature * 159
Resolves passed by the Legislature * 163
Letter relative to Claims against the United States * 164
Letter from the Warden of the State Prison to the Governor * 168

Report of the State Treasurer * 170
Subjects postponed * 173
Names of Members of Senate * 175

1825. Acts passed by the Legislature 431
Resolves of a public nature 436
Regarding Map of New Hampshire 438
Bank Statement 445
Subjects postponed to the next Session . . 446
An Alphabetical List of Towns with names of Representatives returned 448
Acts passed by the Legislature * 209
Resolutions passed by the Legislature * . . 214
Treasurer's Statement and Estimate * . . . 217

1826. Department of War regarding Survey of New Hampshire 341
Report of the State Treasurer 344
Report of the Warden of the State Prison . 351
Report of the Commissioners of the Literary Fund 355
Report of the Commissioners on the Boundary Line between this State and Massachusetts . 358
Report concerning a Map of New Hampshire . 362
Bank Statement 363
Treasury Estimates 365
Report of Committee, with list of Towns and number of Representatives returned 369
Rules of the House 376
Joint Rules of the House and Senate . . . 384
List of Acts passed by the Legislature . . . 385
Department of War regarding Survey of New Hampshire * 221

Report of the State Treasurer * 224
Report of the Warden of the State Prison * . 231
Report of the Commissioners of the Literary Fund * 235
Report of the Commissioners on the Boundary Line between this State and Massachusetts * . 238
Bank Statement * 243
Treasurer's Estimates * 245
List of Acts passed by the Legislature * . . 249

1827. A List of the Towns with names of the Representatives returned by them 396
List of Acts and Resolutions passed by the Legislature 402
Report of a Committee appointed to revise the Laws of this State relating to Towns and Town Officers * 244
Titles of Acts and Resolutions of a public nature * 255

1828. List of Acts passed by the Legislature . . 177
Subjects postponed to the next Session of the Legislature 179
Report of the Commissioners of the Literary Fund * 107
List of Acts passed by the Legislature * . . 109

Adjourned Session.
Treasurer's Estimates 373
Adjutant-General's Statement of the Returns of the State Militia 374
Report of the Commissioners relative to a Boundary Line between this State and Maine . . 376

Report of the Committee on Revision of the Laws 392
Report of the Committee on the Judiciary, on the Constitutionality of filling the Vacancy in Senatorial District 410
List of Acts passed by the Legislature . . 417
List of Postponements to the next Session of the Legislature 423
Treasurer's Estimates * 209
Adjutant-General's Statement of the Returns of the State Militia * 211
Report of the Commissioners relative to the Boundary Line between this State and Maine * 213
Report of the Committee on the Revision of Laws * 229
Rules of the Senate * 253
Joint Rules of the House and Senate * . . 257
List of Acts and Resolves passed by the Legislature * 258
List of Postponements to the next Session of the Legislature * 265

1829. List of Acts passed by the Legislature . . 221
Resolutions of a public nature 223
Report of the Quartermaster-General . . . 224
List of Acts passed by the Legislature * . . 109
Resolutions of a public nature * . . . 111
Report of the State Treasurer * 112
Report of the Commissioners of the Literary Fund * 116
Report of the Adjutant-General * . . . 117
Statement of the Warden of the State Prison * . 118
Bank Statement * 120
Report of the Quartermaster-General * . . 121

1830. List of Acts passed by the Legislature . . 206
Resolutions of a public nature 207
Report of the Quartermaster-General . . . 209
Adjutant-General's Abstract of Returns of Militia 210
Report of Committee relative to publishing a new Edition of the Laws of the State . . . 210
Rules of the House 213
Joint Rules of the Senate and House . . . 219
List of Acts passed by the Legislature* . . 95
Bank Report* 98
Report of the Warden of the State Prison* . 99
Report of the Quartermaster-General* . . 103
Adjutant-General's Abstract of Returns of Militia* 104

1831. List of Acts passed by the Legislature . . 233
Resolutions of a public nature 236
Rules of the House 239
Joint Rules of the Senate and House . . . 247

1832. List of Acts passed by the Legislature . . 121
Resolutions of a public nature 122
Bank Statement 123
Report of the Warden and Officers of the State Prison 124
Report of the Adjutant-General 129

ADJOURNED SESSION.
List of Acts passed by the Legislature . . 189
Resolutions of a public nature 191
Report of the Committee on the State Prison . 192

1833. Treasurer's Estimates 173
Report of the Warden of the State Prison . . 177
Report of the Select Committee on the State Prison 183
Bank Statement 194

1834. Treasurer's Estimates 175
Report of the Commissioners of the Literary Fund 177
Report of the Warden of the State Prison . . 179
Bank Statement 185

1835. Report of Judiciary Committee 177
Report of the Warden and Officers of the State Prison 179
Treasurer's Estimates 190
Report of Commissioners of the Literary Fund . 192
Report of Committee on Banks 194

1836. List of Acts and Resolutions passed 1836 . . 183
Treasurer's Estimates 186
Report of the Commissioners of the Literary Fund 188
Report of the Committee on Banks . . . 190
Report of the Warden of the State Prison . . 193
Report of State Treasurer on Prison Expenditures 207
Report of the Committee on the subject of the Insane 213
Extract from a Report made to the House of Representatives, 1834, by Committee, on the portion of the Governor's Message relating to the Insane 231

An Act in Amendment of an Act declaring the Mode of Conveyance by Deed, passed June, 1829 * 109
Opinion of the Justices as to the Constitutionality of the Foregoing Bill * 113

ADJOURNED SESSION.
Report of Judiciary Committee 365
Report on Surplus Revenue 367
Report of the Committee on Agriculture and Manufactures relating to the Culture of Silk . 371
Militia Act 373
Report of Col. Long on the subject of a Railroad 386
Report of the Commissioners to Indian Stream 396
Bills of a public nature postponed to the next Session of the Legislature * 177

1837. Report of the Committee on the State Prison . 271
Report of the Committee on the Public Archives 273
Report of the Warden and Officers of the State Prison 275
Opinion of the Justices respecting the right of removing Registers of Probate by Address . 282
Report of the Commissioners of the Literary Fund 286

1838. Report of the Select Committee on an Asylum for the Insane 291
An Act to incorporate the New Hampshire Asylum for the Insane 296
An Act to authorize Free Banking in this State . 299
Report of the Warden of the State Prison . . 306

Report of the Commissioners in relation to the Lancaster Bank 323
Report of the Commissioners in relation to the Grafton Bank 326
Report of the Commissioners in relation to the Wolfeborough Bank 331
Treasurer's Estimate of Receipts and Disbursements 335
Report of the Committee on Finance . . 337
Report of the Commissioners on the Literary Fund 340
Report of the Committee on the Pension Agency . 341
Governor's Message 368
Report upon so much of His Excellency's Message as relates to the Public Archives * . . 129
Bills of a public nature postponed to the next Session of the Legislature * 131

1839. List of Acts, Resolutions, and Addresses passed June Session, 1839 335
Documents accompanying the Message of His Excellency Governor Hill, on the subject of the Asylum for the Insane 340
Report of the Nashua & Lowell Railroad Corporation (Third Annual) 346
Report of the Committee on Banks . . . 351
Report of the Commissioners of the Literary Fund 355
Report of the Select Committee to investigate the affairs of the State Prison . . . 357
Report of the Warden of the State Prison . . 364
Report of the Select Committee on the Claim of T. B. Sargent 380
Report of the Standing Committee on the State Prison 386

Report of the Standing Committee on the State Prison on the subject of Connor's Accounts 391
Report of the Committee on Elections . . 401
Report of the Select Committee upon so much of the Message of His Excellency the Governor, as relates to the mode of keeping and disbursing the Revenue of the United States . . . 406
Report of the Select Committee on the subject of Slavery 414
Subjects postponed to the next Session of the Legislature 423
Documents accompanying the Message of His Excellency Governor Hill, on the subject of the Asylum for the Insane * 145
Report of the Judiciary Committee on the Power of the Legislature over Corporations * . . 151

1840. Report of the Committee on Banks . . . 171
Report of the Bank Commissioners in relation to the Concord Bank 174
Report of the Warden of the State Prison . . 201
Report of the Committee on Elections . . 223
Report of the Committee on the Treasurer's Accounts 224
Treasurer's Estimates 225
Report of the Committee on Roads, Bridges, and Canals in relation to the Boston & Maine Railroad 226

ADJOURNED SESSION.

Journal of the Proceeding of the Committee on Elections on the Remonstrance of Robert Wallace 361
Journal of the Committee of the House of Representatives on the Apportionment of Public Taxes 400

Report of the Commissioner in relation to the Wolfeborough Bank 428
Report of the Select Committee on the subject of dividing Strafford County 431
Report of the Standing Committee on the Judiciary 432
Report of the Select Committee on the Asylum for the Insane 434
Report of the Committee on Elections . . 436
Treasurer's Estimates 440

1841. Report of the Joint Committee to audit the Account of the Treasurer 353
Report of the Officers of the State Asylum for the Insane (Second Report) 354
Report of the Commissioners of the Literary Fund 356
Report of the Warden and Officers of the State Prison 357
Report of the Committee on Banks . . . 368
Journal of the Committee on Roads, Bridges, and Canals 372
Communication from Secretary of State showing the Number of Pardons from State Prison by the Executive from 1838 to 1841 383
Judiciary Report on subject of limiting the power of Pardoning Offences 385
Extract from Records of Exeter Town Meeting . 386
Report of the Committee on Military Affairs, relating to the Arsenal at Lancaster . . . 387
Report of the Select Committee upon the North-eastern Boundary 389
Report of the Judiciary Committee on the Controversy between the States of Maine and Georgia and between the States of New York and Virginia 403

List of Acts, Resolutions, and Addresses passed June Session, 1841 410
Report of the Committee on the Judiciary relative to the Surrender of Fugitives from Justice * 147
Resolutions relative to the Northeastern Boundary * 151

1842. Report of the State Geologist 239
Report of the Warden and Officers of the State Prison 245
Reports of Railroad Directors 254
Account of the Expenditures and Profits of the Fourth Turnpike Road 264
Report of the Committee on Treasurer's Accounts 266
Report of the Directors of the Granite Bridge . 267
Report of the Commissioners of the Literary Fund 270
Report of the Committee on Elections . . 271
Report of the Committee on the Apportionment Bill 273
Corporation Act * 117
Report of the Select Committee relative to the Rhode Island Controversy * 120
Documents accompanying the Address for the Removal of John T. Burnham from Office * . 127

ADJOURNED SESSION.

Reports of the Select Committee on the Distribution of the Proceeds of the Sales of the Public Lands, a Protective Tariff, and the Bankrupt Act 401
Report of the Committee on Petitions . . 406
Report of the Committee in relation to Tract of Land granted T. Carlisle 410
Address by the Principal of the American Asylum for the Deaf and Dumb 414

Report of the Officers of the State Asylum for the Insane 420
Reports of the Senate Committee relative to the Distribution of the Proceeds arising from the Sales of Public Lands * 163

1843. Report of the Warden and Officers of the State Prison 259
Report of the Officers of the State Asylum for the Insane 272
Returns of the Adjutant-General . . . 288
Estimates of the State Treasurer . . . 292
Report of the Commissioners of the Literary Fund 293
Report of the Exeter Bank Trustees . . . 294
Report of the Agent for the Public Lands in Coös County 297
Report of the Agent for the Public Lands . . 298
Letter of State Geologist 301
Reports of Railroad Directors 303
Report of the Directors of Amoskeag Falls Bridge Corporation 311
Reports of the Directors of Granite Bridge Corporation 312, 314
Report of the Committee on Banks . . . 315
Reports of the Committee on the State Prison . 318, 324
Report of the Committee on Military Affairs . 325
Resolution in relation to Imprisonment of Citizens in another State on account of Color . . 328
Minority Report of the Committee on Towns and Parishes 329
Amendment of Act to constitute the Town of Nashville 332
Report of the Committee on the Petition of McDaniel 332
Report of the Appraisers of the Property of the State Prison 338

Report of the Select Committee on the State Asylum 346
Petition for a Bank at Portsmouth . . . 347
An Act in relation to Banking 350
An Act in relation to the Superior Court . . 354
An Act to punish Cheating by False Pretences . 355
Statements of the Several County Treasurers . 355

1844. Estimate of Receipts and Disbursements at the Treasury 183
Returns of the Adjutant-General . . . 184
Bill in regard to Banks and Banking . . . 189
Report of the Warden and Officers of the State Prison 192
Report of the Officers of the State Asylum for the Insane 207
Reports of the Bank Commissioners . . . 230
Report of the Committee on Banks . . . 255
Report of the Commissioners of the Literary Fund 257
Report of the Agent of State Lands in Coös County 258
Geological Report 260
Reports of Railroad Directors 261
Report of the Directors of Granite Bridge . . 269
Report of the Directors of Amoskeag Falls Bridge 272
Opinion of the Court relative to Executive Appointments 273
Report of Secretary of State on Returns of Inventories * 84

ADJOURNED SESSION.

Journal of the House Committee on the Apportionment of Public Taxes 371
Report in case of Kittredge *vs.* Warren . . 391
Minority Report of the Committee on Banks . 396
Report of the Judiciary Committee on a Petition 397

Report of the Judiciary Committee upon Illegal Fees 399
Report of the Committee on Education . . 399
Report of the Committee on the State Prison . 401
Statement concerning the Printing of the Geological Report 401
Statement concerning the Survey of Pittsburg . 403

1845. Report of the Officers of the State Asylum for the Insane 337
Report of the Warden and Officers of the State Prison 354
Report of the Commissioners of the Literary Fund 368
Estimates of the Treasurer 370
Report of the Committee on Claims . . . 372
Reports of the Bank Commissioners . . . 375
Reports of Railroad Directors 410
Report of the Directors of the Granite Bridge . 418
Report of the Directors of the Amoskeag Falls Bridge 422

1846. Report of the Officers of the State Asylum for the Insane . . . . . † 1
Report of the Warden and Officers of the State Prison 25
Letter from the Adjutant-General . . . 37
Report of the Committee on Banks . . . 45
Reports of the Bank Commissioners . . . 48
Reports of Railroad Directors 76
Report of a Committee on Railroad Reports . 88
Report of Committee appointed to audit the Accounts of the Treasurer 89

† The appendix for this year is paged I–CVIII.

Report of the Adjutant-General 91
Report of the State Treasurer 92
Report of the Committee on Finance . . . 93
Report of the Directors of the Amoskeag Falls Bridge 96
Accounts of the Adjutant-General . . . 97
Report of Joint Committee on the Condition of the Treasury 102
An Act relating to the Organization of the House of Representatives 105
Report of a Select Committee regarding an Enlargement of the State Asylum for the Insane . 106

1847. Report of the Officers of the State Asylum for the Insane 591
Report of the Warden and Officers of the State Prison 613
Reports of the Bank Commissioners . . . 626
Report of the Adjutant-General 652
Treasurer's Estimates 661
Report of the Railroad Committee . . . 665
Report of Railroad Commissioner . . . 686
Report of the Directors of Granite Bridge . . 701
Report of the Directors of Amoskeag Falls Bridge 702
Report of the Commissioners of the Literary Fund 703
Report of the State Librarian 704

1848. Report of the Officers of the State Asylum for the Insane 315
Report of the Warden and Officers of the State Prison 338
Reports of the Bank Commissioners . . . 350

Report of the Adjutant-General 387
Treasurer's Estimates 389
Reports of Railroad Directors 390
Report of Railroad Commissioners . . . 416
Report of the Directors of the Amoskeag Falls Bridge 433
Report of the Commissioners of the Literary Fund 434
Report of the State Librarian 435
Report of the State Treasurer 437
Memorial of the Directors of the Portsmouth, Newmarket & Concord Railroad . . . 447

1849. Report of the Officers of the State Asylum for the Insane 375
Report of Committee on the Indigent Insane . 415
Report of Committee on the Asylum for the Insane 421
Report of the Warden and Officers of the State Prison 423
Report of the Adjutant-General 434
Report of the State Treasurer 438
Report of the Inspector General of Fish . . 458
Report and Papers in the Examination of the Affairs of the Manchester & Lawrence Railroad 458
Reports of Railroad Directors 498
Reports of the Railroad Commissioners . . 537
Reports of the Bank Commissioners . . . 550
Report of the Agents, on the Survey of Public Lands 596
Report of the State Librarian 603
Report of the Directors of the Amoskeag Falls Bridge 611

1850. Report of the Officers of the State Asylum for the Insane 563
Report of the Committee on the Asylum for the Insane 587
Reports of the Bank Commissioners . . . 596
Reports of the Railroad Commissioners . . 636
Report of the Warden and Officers of the State Prison 713
Report of the State Treasurer 725
Report of the Commissioners of the Literary Fund 743
Report of the Agent, on Public Lands . . 744
Report of the Adjutant-General 746
Report of the Directors of the Amoskeag Falls Bridge 750
Returns from Insurance Companies . . . 751

1851. Report of the Officers of the State Asylum for the Insane 543
Reports of the Bank Commissioners . . . 591
Reports of the Railroad Commissioners . . 628
Report of the Warden and Officers of the State Prison 770
Report of the State Treasurer 784
Returns from Insurance Companies . . . 805
Report of the Adjutant-General 824
Report of the Directors of the Amoskeag Falls Bridge 832
Report of the Commissioners of the Literary Fund 833
Report of the State Librarian 834
Report of the Agent for the Recovery of Books Missing from the Library 841

1852. Report of the Officers of the State Asylum for the Insane 249
Reports of the Bank Commissioners . . . 269
Reports of the Railroad Commissioners . . 312
Report of the State Treasurer 448
Reports of the Insurance Commissioners . . 469
Report of the Warden and Officers of the State Prison 590
Report of the Commissioners on the State Reform School 620
Report of the Adjutant-General 638
Report of the State Librarian 651
Report of the Commissioners of the Literary Fund 657

1853. Summary of the Railroads in New Hampshire . 483
List of Pardons 484
Report of the Officers of the State Asylum for the Insane 487
Report of the Warden and Officers of the State Prison 501
Report of the Adjutant-General 520
Report of the State Treasurer 525
Report of the State Librarian 550
Reports of the Bank Commissioners . . . 559
Reports of the Insurance Commissioners . . 604
Reports of the Railroad Commissioners . . 671
Report of the Commissioners of the Literary Fund 811
Report of the Proceedings of the Monumental Convention, with Documents 813
Report of a Committee to procure a Monument to the memory of Meshech Weare . . . 835

1854. Report of the Officers of the State Asylum for the Insane 509
Report of the Warden and Officers of the State Prison 527
Report of the Adjutant-General 551
Report of the State Treasurer 556
Report of the State Librarian 571
Reports of the Bank Commissioners 576
Reports of the Insurance Commissioners . . 621
Reports of the Railroad Commissioners . . 677
Report of the Commissioners of the Literary Fund 814
Report of the Commissioners to estimate the Expense of an Accurate State Map 816
Report of the Select Committee in relation to the Suncook Manufacturing Company . . 822

1855. Report of the Officers of the State Asylum for the Insane 3
Report of the Warden and Officers of the State Prison 28
Report of the Adjutant-General 88
Report of the State Treasurer 93
Reports of the Bank Commissioners 110
Reports of the Insurance Commissioners . . 164
Reports of the Railroad Commissioners . . 209
Report of the Commissioners of the Literary Fund 358
Report of the State Librarian 360

1856. Report of the Officers of the State Asylum for the Insane 489
Report of the Warden and Officers of the State Prison 514

Report of the Adjutant-General 553
Report of the State Treasurer 557
Reports of the Bank Commissioners . . . 574
Reports of the Insurance Commissioners . . 650
Railroad Returns 702
Report of the Commissioners of the Literary Fund 795
Report of the State Librarian 797
Supplement to the Journal of the House . . 805

1857. Report of the Bank Commissioners 517
Report of the Insurance Commissioners . . 589
Report of the Railroad Commissioners . . 649
Report of the Warden and Officers of the State Prison 699
Report of the Officers of the State Asylum for the Insane 734
Report of the State Treasurer 753
Report of the Commissioners for Locating and Building House of Reformation 767
Report of the Trustees of the Reform School . 774
Report of the Adjutant-General 781
Report of the State Librarian 786
Report of the Commissioners of the Literary Fund 795

1858. Report of the Railroad Commissioners . . . 447
Report of the Insurance Commissioners . . 495
Report of the Bank Commissioners 561
Report of the State Treasurer 635
Report of the Warden and Officers of the State Prison 654
Report of the Officers of the State Asylum for the Insane 695

Report of the Commissioners and Trustees of the Reform School 712
Report of the State Librarian 719
Report of the Adjutant-General 727
Report of the Commissioners of the Literary Fund 737

1859.

Report of the Railroad Commissioners . . 431
Report of the Insurance Commissioners . . 473
Report of the Bank Commissioners . . . 533
Report relative to Contract for Furnishing Liquors to the Agents of Towns 619
Abstract of Liquor Sales 622
List of Liquor Agents 626
Circular by the Governor to the Liquor Agents . 631
Report of the State Treasurer 635
Report of the Adjutant-General 647
Message from the Governor, and Letter from William W. Eastman, resigning the Office of Warden of the State Prison 659
Report of the Warden and Officers of the State Prison 660
Report of the Officers of the State Asylum for the Insane 689
Report of the Trustees of the Reform School . 711
Report upon Eastern Boundary of New Hampshire 753
Report upon Public Lands in New Hampshire . 769
An Act in Relation to Public Lands in New Hampshire 779
Report of the State Librarian 783
Report of the Commissioners of the Literary Fund 795

1860. Rules of the House 345
Joint Rules of the Senate and House . . . 353
Report of the Railroad Commissioners . . 357
Report of the Bank Commissioners . . . 404
Report of the Insurance Commissioners . . 505
Abstract of Sales of Liquors 574
List of Liquor Agents 580
Circular by the Governor 585
Report of the State Treasurer 590
Report of the Adjutant-General 601
Report of the Warden and Officers of the State Prison 615
Report of the Trustees of the Reform School . 660
Report of the Officers of the State Asylum for the Insane 691
Statistics of Litigation 717
Opinion of the Justices 732
Report of the Commissioners concerning Prison Accounts 735
Report of the Commissioners of the Literary Fund 736
Report of the State Librarian 738

1861. Opinion of the Justices of the Supreme Judicial Court 218
Rules of the House 225
Joint Rules of the Senate and House . . . 238
Rules of the Senate 240
Report of the Bank Commissioners . . . 245
Report of the Insurance Commissioners . . 344
Report of the Railroad Commissioners . . 416
Report of the State Treasurer 472
Report of the Adjutant-General 482
Report of the Trustees of the Reform School . 528
Report of the Officers of the State Asylum for the Insane 559

Report of the Warden and Officers of the State Prison 579
Abstract of Sales of Liquor 626
Report of the Commissioners of the Literary Fund 637
Report of the State Librarian 639

1862. Rules of the Senate 308
Rules of the House 311
Joint Rules of the Senate and House . . . 321
Report of the Bank Commissioners . . . 323
Report of the Insurance Commissioners . . 463
Report of the Railroad Commissioners . . 524
Report of the State Treasurer 561
Report of the Adjutant-General 578
Report of the Quartermaster-General . . . 598
Report of the Trustees of the Reform School . 606
Report of the Officers of the State Asylum for the Insane 649
Report of the Warden and Officers of the State Prison 681
Report of the Commissioners of the Literary Fund 733
Report of the State Librarian 735

1863. Rules of the Senate 355
Rules of the House 359
Joint Rules of the Senate and House . . . 369
Report of the Committee on Mileage . . . 371
Report of the Bank Commissioners . . . 382
Report of the Insurance Commissioners . . 489
Report of the Railroad Commissioners . . 532

Report of the State Treasurer 569
Report of the Special Committee to Examine the State Treasurer's Accounts 582
Report of the Adjutant-General 584
Report of the Select Committee to Examine the Adjutant-General's Account 630
Report of the Trustees of the Reform School . 646
Report of the Officers of the State Asylum for the Insane 696
Report of the Warden and Officers of the State Prison 718
Report of the Commissioners of the Literary Fund 760
Report of the State Librarian 762

1864. Rules of the Senate 393
Rules of the House 397
Joint Rules of the Senate and House 407
Communication from the Adjutant-General . 418
Report of the Commissioners of the Literary Fund 421
Report of the State Librarian 423
Report of the State Treasurer 429
Report of the Adjutant-General 440
Report of the Warden and Officers of the State Prison 577
Report of the Officers of the State Asylum for the Insane 618
Report of the Trustees of the Reform School . 641
Report of the Bank Commissioners 696
Report of the Railroad Commissioners . . . 825
Report of the Insurance Commissioners . . . 880
Report of the Committee upon the Subject of an Agricultural College 921

1865. Rules of the Senate 265
Rules of the House 269
Joint Rules of the Senate and House . . . 279
Report of the Select Committee on Fisheries . 281
Report of the State Treasurer 287
Report of the Auditor 298
Report of the Adjutant-General . . . 435
Report of the Quartermaster-General . . . 509
Report of the Warden and Officers of the State Prison 533
Report of the Officers of the State Asylum for the Insane 577
Report of the Trustees of the Reform School . 598
Report of the Bank Commissioners . . . 653
Report of the Railroad Commissioners . . 765
Report of the Insurance Commissioners . . 799
Report of the Commissioners on Contagious Diseases among Cattle 833

1866. Rules of the Senate 1
Rules of the House 7
Joint Rules of the Senate and House . . . 19
Report of the Warden and Officers of the State Prison 21
Report of the Commissioners upon the War Expenditures 75
Report of the Auditor of Accounts . . . 107
Report of the State Treasurer 171
Report of the Officers of the State Asylum for the Insane 229
Report of the Trustees of the Reform School . 276
Report of the Adjutant-General 325
Report of the Insurance Commissioners . . 355
Report of the Quartermaster-General . . . 381

Report of the Commissioners on Fisheries . . 419
Report of the Bank Commissioners . . . 435
Report of the Railroad Commissioners . . 507

1867. Rules of the Senate 1
Rules of the House 5
Joint Rules of the Senate and House . . . 15
Report of the Warden and Officers of the State Prison 21
Report of the Insurance Commissioners . . 67
Report of the State Treasurer 99
Report of the Officers of the State Asylum for the Insane 149
Report of the Commissioner on a State Normal School 185
Report of the Auditor of Accounts . . . 199
Report of the Officers of the Reform School . 240
Report of the Bank Commissioners . . . 287
Report of the Trustees of the State Library . 355
Report of the Adjutant-General 365
Report of the Railroad Commissioners . . 483
Report of the Trustees of the Agricultural College 523
Report of the Committee on the State Prison . 535
Report of the Special Committee on the State Prison 547
Report of the Committee on Education . . 563
Report of the Committee on River Fisheries . 569
Governor's Valedictory Address . . . 577
Governor's Message 589

1868. Rules of the Senate 1
Rules of the House 5
Joint Rules of Senate and House . . . 16

Report of the State Treasurer 21
Report on Assigned United States Bounties, etc. . 71
Report of the Warden and Officers of the State Prison 159
Report of the Officers of the State Asylum for the Insane 219
Report of Bank Commissioners 261
Report of the Trustees of the Reform School (12th Annual) 323
Governor's Message 381
Report of the Insurance Commissioners . . 401
Report of the Railroad Commissioners . . 481
Report of the Commissioners on Inland or River Fisheries 499
Report of the Committee on the State Prison . 511
Report of the Trustees of the New Hampshire College of Agriculture and the Mechanic Arts 533
Report of the Adjutant-General 553
Report of Superintendent of Public Instruction . 691

1869. Rules of the Senate 3
Rules of the House 5
Joint Rules of Senate and House 17
Report of the Warden and Officers of the State Prison 23
Report of the Officers of the State Asylum for the Insane 87
Report of the Insurance Commissioners . . 121
Report of the Trustees of the State College of Agriculture, etc. 247
Report of the Adjutant-General 331
Report of the State Treasurer 391
Report of the Trustees of the Reform School (13th Annual) 335
Report of the Bank Commissioners 487

Report of the Railroad Commissioners . . 551
Governor's Message 591
First Annual Report upon the Geology and Mineralogy of the State — Hitchcock . . . 605
Report of the Fish Commissioners . . . 641
Report of the Committee on the State Prison . 653
Report of the Special Committee on the State Prison 661
Report of the Committee of the Judiciary on Increase of Fares and Freights upon the Concord & Portsmouth Railroad 664
Report of Superintendent of Public Instruction . 669

Contents of the New Hampshire Annual Reports, 1870-1889.

		No. pages
1870.	Report of the Trustees of the College of Agriculture (4th Annual), with map	39
	Report of the State Treasurer	46
	Report of the Officers of the Asylum for the Insane (29th Annual)	40
	Report of the Officers of the State Reform School (14th Annual)	40
	Report of the Adjutant-General	48
	Report of the Railroad Commissioners	37
	Report of the Bank Commissioners	64
	Report of the State Librarian (1st Report under Act of 1866)	16
	Report of the Commissioners on Fisheries (5th Annual)	15
	Report of the Insurance Commissioner (19th Annual Insurance Report)	150
	Report of the Officers of the State Prison	47
	Report upon the Geology and Mineralogy of the State (2d Annual), with Folding Map	37
	Report of the Commissioners on the Preliminary Examination of the Water Power of the State, with Folding Map	79
1871.	Report of the State Treasurer	40
	Report of the Bank Commissioners	65
	Report of the Insurance Commissioner	154
	Report of the Railroad Commissioners	51

Report of the Adjutant-General 32
Report of the Commissioners on Fisheries . . 11
Report of the State Librarian 14
Report of the Officers of the Asylum for the Insane 31
Report of the Officers of the State Prison . . 31
Report of the Officers of the State Reform School 93
Report of the Geological Survey of the State . 82
Report of the Trustees of the College of Agriculture . . . . . 1 plate + 45
Report of Superintendent of Public Instruction (4th Annual Report; 25th Annual Report upon the Schools of New Hampshire) . . . 258

1872. Report of the State Treasurer 45
Report of the Officers of the State Prison . . 32
Report of the Officers of the Reform School . 93
Report of the Officers of the Asylum for the Insane 54
Report of the State Librarian 22
Report of the Adjutant-General 26
Report of the Bank Commissioners . . 83 + [2]
Report of the Trustees of the State Normal School (2d Annual) 15
Report of the Insurance Commissioner . . 188
Report of the Commissioner on Fisheries . . 15
Report of the Superintendent of Public Instruction 197
Report of the Bureau of Labor Statistics . . 106
Report of the Railroad Commissioners . . 47
Report of the Geological Survey, with Folding Map 56

1873. Governor's Message 17
Report of the State Treasurer 43
Report of the Bank Commissioners . . . 91
Report of the Insurance Commissioner . . 138
Report of the Railroad Commissioners . . 38
Report of the Commissioners on Fisheries . . 13
Report of the Geological Survey . . 1 plate + 15
Report of the State Librarian 17
Report of the Adjutant-General 24
Report of the Officers of the State Prison . . 27
Report of the Officers of the Asylum for the Insane 42
Report of the Commissioners on Insane Paupers 6
Report of the Officers of the Reform School . 96
Report of the Trustees of the College of Agriculture 33
Report of the Trustees of the State Normal School 1 plate + 39
Report of the State Superintendent of Public Instruction 318
Report of the International Prison Congress, held in London, July 3–13, 1872 — By Allen Folger 50

1874. Governor's Message 14
Report of the State Treasurer 40
Report of the Bank Commissioners . . . 143
Report of the Insurance Commissioner . . 144
Report of the Railroad Commissioners . . 60
Report of the Commissioners on Fisheries . . 15
Report of the State Librarian 19
Report of the Adjutant-General 26
Report of the Officers of the State Prison . . 24
Report of the Trustees of the Asylum for the Insane 46
Report of the Officers of the Reform School . 86
Report of the Trustees of the College of Agriculture 37

Report of the Trustees of the State Normal School 40
Report of the State Superintendent of Public Instruction 296

1875. Governor's Message 11
Report of the State Treasurer 39
Report of the Bank Commissioners . . . 162
Report of the Insurance Commissioner . . 154
Report of the Railroad Commissioners . 90 + [2]
Report of the Commissioners on Fisheries . . 16
Report of the State Librarian 16
Report of the Adjutant-General 22
Report of the Officers of the State Prison * . 28
Report of the Officers of the Asylum for the Insane 48
Report of the Officers of the Reform School . 123
Report of the Trustees of the College of Agriculture . . . . . 1 plate + 43
Report of the Trustees of the State Normal School 51
Report of the State Superintendent of Public Instruction 400
Report of the Survey of the Boundary between New Hampshire and Maine 15

1876. Governor's Message 15
Report of the State Treasurer 36
Report of the Bank Commissioners 158
Report of the Insurance Commissioner . . 144
Report of the Railroad Commissioners . . 40
Report of the Commissioners on Fisheries . . 16
Report of the State Librarian 18

* Report of the Commissioners on new State Prison, 10 pp., appears in the table of contents.

Report of the Adjutant-General . . . 23
Report of the Officers of the State Prison . . 35
Report of the Officers of the Asylum for the Insane 48
Report of the Officers of the Reform School . 125
Report of the Trustees of the College of Agriculture . . . . . 1 plate + 19
Report of the Trustees of the State Normal School 52
Report of the Board of Tax Commissioners . 52

1877. Governor's Message 30
Report of the State Treasurer 39
Report of the Bank Commissioners . . 162 + [2]
Report of the Insurance Commissioner . . 58
Report of the Railroad Commissioners, with Appendix . . . . . 58 + 36
Report of the Commissioners upon Fish and Game 45
Report of the State Librarian 22
Report of the Adjutant-General 24
Report of the Officers of the State Prison . . 38
Report of the Officers of the Asylum for the Insane 56
Report of Auditors of the Asylum for the Insane 7
Report of the Officers of the Reform School . 119
Report of the Trustees of the College of Agriculture . . . . . 1 plate + 42
Report of the Trustees of the State Normal School 48
Report of Special Committee, State Normal School 15
Report of the Superintendent of Public Instruction 260

1878. Governor's Message 30
Report of the State Treasurer 43
Report of the Bank Commissioners . . 171 + [2]
Report of the Insurance Commissioner . . 70
Report of the Railroad Commissioners . 44 + [2]
Report of the Commissioners upon Fish and Game 75
Report of the State Librarian 22
Report of the Adjutant-General . . . 37
Report of the Officers of the State Prison . 35
Report of the Officers of the Asylum for the Insane 66
Report of the Officers of the Reform School . 95
Report of the Trustees of the College of Agriculture . . . . . 1 plate + 45
Report of the Trustees of the State Normal School 35
Report of the Superintendent of Public Instruction 251

1879. Governor's Message 25
Report of the State Treasurer 43
Report of the Bank Commissioners . . . 190
Report of the Insurance Commissioner . . 50
Report of the Railroad Commissioners . . 143
Report of the Commissioners upon Fish and Game 51
Report of the State Librarian 21
Report of the Adjutant-General . . . 39
Report of the Officers of the State Prison . . 31
Report of the Officers of the Asylum for the Insane 82
Report of the Officers of the Reform School . 89
Report of the Trustees of the College of Agriculture . . . . . 1 plate + 55
Report of the Trustees of the State Normal School 35
Report of the Superintendent of Public Instruction 240

1880. Report of the State Treasurer 45
Report of the Bank Commissioners . . . 174
Report of the Insurance Commissioner . . 46
Report of the Railroad Commissioners . . 141
Report of the Commissioners upon Fish and Game . . . . . 1 plate + 61
Report of the State Librarian 17
Report of the Adjutant-General . . . 86
Report of the Officers of the State Prison . . 38
Report of the Officers of the Asylum for the Insane 79
Report of the Officers of the Reform School . 93
Report of the Trustees of the State Normal School 29
Report of the Superintendent of Public Instruction 221

1881. Governor's Message 16
Report of the State Treasurer 47
Report of the Bank Commissioners . . . 200
Report of the Insurance Commissioner . . 50
Report of the Railroad Commissioners . . 150
Report of the Commissioners upon Fish and Game 90
Report of the State Librarian 18
Report of the Adjutant-General . . . 72
Report of the Officers of the State Prison . . 37
Report of the Commissioners for the Erection of New State Prison 63
Report of the Officers of the Asylum for the Insane 82
Report of the Officers of the Reform School . 118
Report of the Trustees of the College of Agriculture (biennial) . . . . . 1 plate + 60
Report of the Trustees of the State Normal School . . . . . 48 + [2]
Report of the Superintendent of Public Instruction 251

1882. Report of the State Treasurer 48
Report of the Bank Commissioners 200
Report of the Insurance Commissioner . . 60
Report of the Railroad Commissioners . . 110
Report of the Commissioners upon Fish and Game 47
Report of the State Librarian 22
Report of the Adjutant-General 83
Report of the Officers of the State Prison . . 30
Report of the Officers of the Asylum for the Insane 72
Report of the Officers of the Industrial School . 80
Report of the Trustees of the State Normal School 48
Report of the Superintendent of Public Instruction 301

1883. Governor's Message 23
Report of the State Treasurer 44
Report of the Bank Commissioners 221
Report of the Insurance Commissioner . . 58
Report of the Railroad Commissioners . . 108
Report of the Commissioners upon Fish and Game . . . . . 1 plate + 95
Report of the State Librarian 19
Report of the Adjutant-General 97
Report of the Officers of the State Prison . . 31
Report of the Officers of the Asylum for the Insane 70
Report of the Commission upon the Pauper Insane 33
Report of the Officers of the Industrial School . 83
Report of the Trustees of the College of Agriculture . . . . . 1 plate + 61
Report of the Trustees of the State Normal School 48
Report of the Superintendent of Public Instruction 304

1884. Report of the State Treasurer 48
Report of the Bank Commissioners 256
Report of the Insurance Commissioner . . . 54
Report of the Railroad Commissioners . 239 + [2]
Report of the Commissioners upon Fish and Game 71
Report of the State Librarian 21
Report of the Adjutant-General 70
Report of the Officers of the State Prison . 30 + [2]
Report of the Officers of the Asylum for the Insane 66
Report of the Officers of the Industrial School . 67
Report of the Trustees of the State Normal School 40
Report of the Superintendent of Public Instruction 308

1885. Governor's Message 15
Report of the State Treasurer 48
Report of the Bank Commissioners 340
Report of the Insurance Commissioner . . . 54
Report of the Railroad Commissioners, with Folding Map . . . . . viii. + 349
Report of the Commissioners upon Fish and Game . . . . . 14 plates + 76
Report of the State Librarian 23
Report of the Adjutant-General 122
Report of the Officers of the State Prison . . 30
Report of the Officers of the Asylum for the Insane . . . . . 1 plate + 75
Report of the Officers of the Industrial School . 72
Report of the Trustees of the State Normal School 44
Report of the Trustees of the College of Agriculture . . . . . 1 plate + 107
Report of the Superintendent of Public Instruction 298

1886, Vol. I.

Report of the State Treasurer 69
Report of the Bank Commissioners 427
Report of the Insurance Commissioner . . 78
Report of the Railroad Commissioners, with Folding Map . . . 1 plate + xvi. + 375
Report of the Commissioners upon Fish and Game 11
Report of the State Librarian 25

Vol. II.

Report of the Adjutant-General 134
Report of the Officers of the State Prison . . 25
Report of the Officers of the Asylum for the Insane . . . . . 3 plates + 121
Report of the Officers of the Industrial School . 88
Report of the Trustees of the State Normal School 44
Report of the Superintendent of Public Instruction 320
Report of the Board of Health (5th Annual) . 326

1887, Vol. I.

Governor's Message 23
Report of the State Treasurer 64
Report of the Bank Commissioners 401
Report of the Insurance Commissioner . xx. + 64
Report of the Railroad Commissioners, with Folding Map . . . . . 1 plate + 413
Report of the Commissioners upon Fish and Game 28
Report of the State Librarian 26
Report of the Board of Agriculture (15th Annual) 484
Report of the Commissioners appointed to ascertain and establish the true Boundary Line between Massachusetts and New Hampshire, with 2 Folding Maps 20

Vol. II.

Report of the Adjutant-General . . 84 + [2]

Report of the Officers of the State Prison . . 28
Report of the Officers of the Asylum for the Insane . . . . . 3 plates + 95
Report of the Officers of the Industrial School . 77
Report of the Trustees of the State Normal School 49
Report of the Superintendent of Public Instruction 379
Report of the Board of Health 302
Report of the Trustees of the College of Agriculture . . . . . 1 plate + 263
Report of the Board of Valuation and Taxation (7th Annual) 61
Report of the Registrar of Vital Statistics (6th Annual) 163

1888, Vol. I.

Report of the State Treasurer 74
Report of the Bank Commissioners . . . 537
Report of the Railroad Commissioners, with Folding Map . . . . . iv. + 372
Report of the State Librarian 31
Report of the Officers of the State Prison . 22 + [2]
Report of the Board of Agriculture . . . 462

Vol. II.

Report of the Adjutant-General . . 56 + [2]
Report of the Officers of the Asylum for the Insane . . . . . 3 plates + 76
Report of the Officers of the Industrial School . 80
Report of the Trustees of the State Normal School 57
Report of the Insurance Commissioner . l. + 278
Report of the Superintendent of Public Instruction 345
Report of the Board of Health 326
Report of the Registrar of Vital Statistics . . 249

1889, Vol. I.

Governor's Message	17
Report of the State Librarian	44
Report of the Insurance Commissioner	xxviii. + 381
Report of the Railroad Commissioners, with Folding Map	300 + 178
Report of the Commissioners upon Fish and Game (1888)	12
Report of the Commissioners upon Fish and Game	50
Report of the Board of Agriculture	408
Report of the Adjutant-General	90 + [2]
Report of the Officers of the Asylum for the Insane	3 plates + 82

Vol. II.

Report of the Bank Commissioners	504
Report of the State Treasurer	78
Report of the Officers of the State Prison	24
Report of the Officers of the Industrial School	80
Report of the Trustees of the Normal School	65
Report of the Trustees of the College of Agriculture	3 plates + 72 + 104
Report of the Superintendent of Public Instruction	370
Report of the Registrar of Vital Statistics	248
Report of the Board of Valuation and Taxation	47

REGIMENTAL HISTORIANS.

New Hampshire in the War of the Rebellion—Regimental Historians, Etc.

FIRST REGIMENT.

Historian, Rev. Stephen G. Abbott, A. M., chaplain of the regiment, Keene, N. H.

History published by the author, 1890. Sentinel Printing Co., Keene, N. H., printers.

SECOND REGIMENT.

Historian, Private Martin A. Haynes, Lake Village, N. H.

History, first edition, published 1865. Charles F. Livingston, printer, Manchester, N. H. Now out of print. A second edition by the same author is in preparation.

THIRD REGIMENT.

Historian, Lieutenant Daniel Eldridge, 36 Bromfield street, room 2, Boston, Mass.

History nearly prepared for publication.

FOURTH REGIMENT.

Historian, John G. Hutchinson, Manchester, N. H.

History in preparation.

FIFTH REGIMENT.

Historian, Surgeon Wm. Child, M. D., New Hampton, N. H.

History in preparation.

SIXTH REGIMENT.

Historian, Lieutenant Lyman Jackman, with Amos Hadley assistant, both of Concord, N. H.

History nearly prepared for publication.

SEVENTH REGIMENT.

Historian, Major H. F. W. Little, Manchester, N. H.
History in preparation.

EIGHTH REGIMENT.

Historian, Captain John M. Stanyan, Milford, N. H.
History in preparation.

NINTH REGIMENT.

Historian, Lieutenant John E. Mason, M. D., Washington, D. C.
History nearly prepared for publication.

TENTH REGIMENT.

Historian, Captain James A. Sanborn, Portsmouth, N. H.
History in preparation.

ELEVENTH REGIMENT.

Historian, Lieutenant-colonel Leander W. Cogswell, Henniker, N. H.
History in an advanced state of preparation.

TWELFTH REGIMENT.

Historian, Captain Asa W. Bartlett, Pittsfield, N. H.
History in press.

THIRTEENTH REGIMENT.

Historian, Lieutenant S. Millett Thompson, Providence, R. I.
History published, 1888, by the Regimental Association. Riverside Press, Cambridge, Houghton, Mifflin & Co.

FOURTEENTH REGIMENT.

Historian, Sergeant Francis H. Buffum, Winchester, N. H.
History published, 1882, by the Regimental Committee on publication. Franklin Press, Rand, Avery & Co., Boston.

FIFTEENTH REGIMENT.

Historian, Corporal Charles McGregor, Nashua, N. H.

SIXTEENTH REGIMENT.

Historian, Adjutant Luther D. Townsend, D. D., Watertown, Mass., and Boston University Theological School, Boston, Mass., with assistants O. W. Baldwin, Lebanon, N. H., H. L. Baldwin, Washington, D. C.

SEVENTEENTH REGIMENT.

Historian, Colonel Henry O. Kent, Lancaster, N. H.

EIGHTEENTH REGIMENT.

No historian appointed.

FIRST CAVALRY.

Historian, Captain E. W. Smith, Soldiers' Home, Tilton, N. H.

History in preparation.

SHARPSHOOTERS.

Historian for N. H. companies, Private Horace J. Kenney, Littleton, N. H.

History in preparation.

ARTILLERY.

Historian, R. H. Paine, Suncook, N. H.

History in preparation.

NAVY. — NEW HAMPSHIRE CONTINGENT.

No historian appointed.

REGULAR ARMY. — NEW HAMPSHIRE CONTINGENT.

No historian appointed.

CHECK-LIST

OF

NEW HAMPSHIRE LAWS,

1789–1889.

OCTAVOS.

Those issued between 1699 and 1789 were all in Folio form.

ABBREVIATIONS.

p. means page.
pp. " pages.
t. " title page, 1 leaf.
tt. " two title pages, 2 leaves.
n. t. p. means no title page.
[ ] Figures in [ ] mean pages printed on but not numbered.
[1] means a *verso* or left-hand page not numbered.
1l. means a leaf not numbered and printed on one side only.
[2] " " " " both sides.

NEW HAMPSHIRE LAWS, 1789-1889.

1789. Perpetual Laws, 1776 to 1789. Sometimes called the "Horn Book," pp. 256 (text ends on p. 244).

1789. June, pp. t. 247-252. Paged in sequence of the Perpetual Laws.
December, pp. t. 255-263.

1790. June. (?)

1791. January. (?)
June. (?)
November. (?)

1792. Revised Laws, pp. 396.

1792. June, pp. t. 397-422. Paged in sequence of Revised Laws, 1792.
November, pp. t. 423-451.

1793. June, pp. t. 453-456.
December, pp. t. 461-481.

1794. June, pp. t. 483-505. No page numbered 497. This error was not corrected and the even numbers continue on right-hand pages through the series.
December, pp. t. 507-521.

1795. June, pp. t. 524-527.
December, pp. t. 530-535.

1796. June, pp. t. 538-550.
December, t. 3-22. This series ends somewhat abruptly, probably owing to the appearance of the Revised Laws, 1797.

1797. Revised Laws, pp. 492.

1797. June, pp. t. 493-498. Paged in sequence of Revised Laws, 1797.
November, pp. t. 499-512.

1798. June, pp. tt. 515, 516. The first title page is only a backing or half title, but, as it was printed as part of the first form or sheet, it should be counted as a part of the book.
December, pp. tt. 517-530.

1799. June, pp. tt. 531-541.
December, pp. tt. 542-561.

1800. June, pp. tt. 562-565.
November, pp. tt. 566-579.

1801. June, pp. tt. 580-586.

1802. June, pp. 55. As each pamphlet is now paged separately the title pages are not separately designated.

1803. June, pp. 13.
November, pp. 56.

1804. June, pp. 64.
November, pp. 56.

1805. June, pp. 32.

1805. Revised Laws, pp. t. [2] 531.

1805. December, pp. 64.

1806. June, pp. 26.

1807. June, pp. 52.

1808. June, pp. 31, [1].
November, pp. 77, 1l., [2].

1809. June, pp. 47.

1810. June, pp. 31, [1].

1811. Laws [in force] December, 1805, to June, 1810, pp. 136.

1811. June, pp. 39.

1812. June, pp. 56.
November, pp. 40.

1813. June, pp. 44.
October, pp. 13 ll.

1814. June, pp. 40.

1815. Compiled Laws [Vol. I.], pp. t. [2] 636 and index.

1815. June, pp. t. ll. 21, 18.—Full description: Title to Vol. II. (the Compiled Laws, 1815, being Vol. I.), 1 leaf. Advertisement, 1 leaf. Laws June session, 1815, pp. 1-21. Appendix, pp. 1-18.

1816. June. pp. (n. t. p.) 23-66.
November, pp. (n. t. p.) 67-100.

1817. June, pp. (n. t. p.) 101-128.

1818. June, pp. (n. t. p.) 129-170.

1819. June, pp. (n. t. p.) 171-254.

1820. June, pp. (n. t. p.) 255-286.
November, pp. (n. t. p.) 287-372.

1821. June, pp. (n. t. p.) 373-403 and 19-42; pp. 19-42 an appendix and an index to Laws 1815-21; the nine pamphlets making a Vol. II. (Laws 1815-21), with pp. t. ll. 403+42.

1822. June, pp. t. 3-62, 4 [2]. The title page is that of a Vol. III., and this session is the first to have a separate index.

1823. June, pp. t. 63-93, [2].

1824. Compiled Laws, Vol. II., 1815 to 1823, pp. 291.

1824. June, pp. (n. t. p.) 95-110.

June, pp. (n. t. p.) 1-16. The pages of the last two are word for word, line for line, and page for page the same except the numbering of pages; the publication of the compilation Vol. II. evidently suggesting a new volume of pamphlet laws.

November, pp. t. 17-48, [2]. This title is that of Vol. III., Laws passed since June 1, 1824, and is intended to be bound in front of the June session. The index with the November session includes the two sessions.

1825. June, pp. t. 53-87.

1826. June, pp. t. 85-151, [2].

1827. June, pp. t. 155-271.

1828. June, pp. t. 263-290, il.
November, pp. t. 293-480.

1829. June, pp. t. 485-574.

1830. Revised Laws, pp. VII., 623.

1830. June, pp. t. 3-31, [1]. The Revised Laws, 1830, having appeared, a new series of pages is begun.
June, pp. t. 3-16, no index. This title page reads "Acts passed subsequent to June, 1829."

1831. June, pp. t. 17-47, [1]. These last two are sometimes found as one pamphlet without the 1831 title page, and with an index (p. [1]) to both sessions.

1832. June, pp. t. 49-66.
November, pp. t. 69-114.

1833. June, pp. t. 117-139, il.

1834. June, pp. t. 145-178.

1835. June, pp. t. 181-296, [3]. Private Acts first printed in full at this session.

1836. June, pp. t. 299-370, [2].
November, pp. t. 227-366, [2].

1837. June, pp. t. 291-386, [2]. Paged in sequence of *Public* Acts of session before. This order is often followed.

1838. June, pp. t. 337-414, [2].

1839. June, pp. t. 379-505, [2].

1840. June, pp. t. 425-461, [1].
November, pp. t. 455-532.

1841. June, pp. t. 515-607, [1].

1842. June, pp. t. 581-616, il.

1842. Revised Statutes, pp. XV., 555.

1842. November, pp. t. 3-51, [1]. The statutes of 1842 having been issued, a new series begins.

1843. June, pp. t. 53-87.

1844. June, pp. t. 87-121.
November, pp. t. 121-220.

1845. June, pp. t. 223-293.

1846. June, pp. t. 295-460.

1847. June, pp. t. 459-584. The index is to Acts since Statutes, 1842.

1848. June, pp. t. 587-672.
November, pp. t. 675-811.

1849. June, pp. t. 811-922.

Revised Statutes, 2d edition, 1851, Acts to June, 1850, added, pp. XV., 555, 160.

1850. June, pp. t. 925-1050.

1851. June, pp. t. 1053-1174.

1852. June, pp. t. 1177-1202, [2].
November, pp. t. 1207-1314, [2].

1853. Compiled Statutes, pp. XVI., 760.

Compiled Statutes, 2d edition, 1854, (errors corrected).

1853. June, pp. t. 1319-1412.

1854. June, pp. t. 1415-1524.

1855. June, pp. t. 1527-1728.

1856. June, pp. t. 1731-1864.

1857. June, pp. t. 1867-1975. Two pages counted as 1932; error continued through 1859.

1858. June, pp. t. 1978-2085.

1859. June, pp. t. 2088-2231.

1860. June, pp. t. 2235-2400. No page counted as 2232 to correct previous error.

1861. June, pp. t. 2403-2540.

1862. June, pp. t. 2543-2692.

1863. June, pp. t. 2695-2804.

1864. June and August, pp. t. il. 2809-3102, [2].

1865. June, pp. t. il. 3109-3230.

1866. June, pp. t. il. 3235-3410.

1867. Revised Statutes, pp. tt. XVII., t. 676.

1867. June, pp. t. il. 1-119.

1868. June, pp. t. il. 125-259, il.

1869. June, pp. t. il. 267-390.

1870. June, pp. t. il. 395-504.

1871. June, pp. t. il. 509-646.

1872. June, pp. t. il. 5-137.

1873. June, pp. t. il. 143-263.

1874. June, pp. t. il. 269-431.

1875. June, pp. t. il. 437-551.

1876. June, pp. t. il. 557-739.

1877. June, pp. t. il. 5-144.

1878. General Laws, pp. XX., 812.

1878. June, pp. t. il. 149-324.

1879. June, pp. t. il. 329-435.

1881. June, pp. t. il. 441-684.

1883. June, pp. t. il. 5-222.

1885. June, pp. t. il. 227-401.

1887. June, pp. t. il. 407-729.

1889. June, pp. t. il. 5-288.

TABLE OF SESSIONS OF THE LEGISLATURE
OF NEW HAMPSHIRE,
1776–1889.

Table of Sessions of the Legislature of New Hampshire. 1776-1889.

Explanation. — The first session of each Legislature appears in Roman letters. All other sessions are printed in Italics.

Convened.	Adjourned.	Place of Session.
1776, Jan. 5 *	Jan. 27, 1776	Exeter.
March 6	*March 23*	Exeter.
June 5	*July 6*	Exeter.
Sept. 4 †	*Sept. 20* ‡	Exeter.
Oct. 16 §	*Oct. 19*	Exeter.
Nov. 27	*Dec. 13*	Exeter.
Dec. 18	Jan. 18, 1777	Exeter.
1777, *March 12*	*April 12*	Exeter.
June 4	*June 28* ‖	Exeter.
July 17 §	*July 19*	Exeter.
Sept. 17	*Sept. 27* ¶	Portsmouth.
Nov. 5	*Nov. 29*	Exeter.
Dec. 17	Jan. 3, 1778	Exeter.
1778, *Feb. 11*	*March 14*	Exeter.
May 20	*May 23*	Exeter.
Aug. 12	*Aug. 22*	Exeter.
Oct. 28	*Nov. 28*	Exeter.
Dec. 16	Dec. 26	Exeter.

* Met at Exeter Dec. 21, 1775, as a body of delegates from the various New Hampshire towns and parishes, and, with the approval of the Continental Congress, formed a provisional government to continue until the settlement of the dispute with Great Britain. For this purpose the delegates resolved themselves, Jan. 5, 1876, into a "House of Representatives or Assembly of the Colony of New Hampshire," and provided for an upper house (Council) of Legislature.

† Name changed from "Colony" to "State" Sept. 11, 1776.

‡ Adjourned to meet Nov. 27.

§ Specially summoned by the Committee of Safety.

‖ Adjourned to meet Sept. 17.

¶ "Fourth session."

Convened.	Adjourned.	Place of Session.
1779, *March* 10	*April* 3, 1779	Exeter.
June 16	*June* 26	Exeter.
Oct. 20	*Nov.* 19	Exeter.
Dec. 15	Jan. 1, 1780	Exeter.
1780, *Feb.* 9	*March* 18 *	Exeter.
April 19 †	*April* 29	Exeter.
June 7	*June* 28 ‡	Exeter.
Oct. 11	*Nov.* 11	Portsmouth.
Dec. 20	Jan. 27, 1781	Exeter.
1781, *March* 14	*April* 7	Exeter.
June 13	*July* 4 §	Exeter.
Aug. 22 †	*Sept.* 1 ‖	Exeter.
Nov. 7	*Nov.* 29 ¶	Exeter.
Dec. 19	Jan. 18, 1782	Exeter.
1782, *March* 13	*March* 27	Concord.
June 11	*June* 27	Concord.
Sept. 10	*Sept.* 14	Concord.
Nov. 12	*Nov.* 23	Exeter.
Dec. 18	Dec. 28	Portsmouth.
1783, *Feb.* 12	*March* 1, 1783	Exeter.
June 10	*June* 21	Concord.
Oct. 28	*Nov.* 8	Concord.
Dec. 17	Jan. 3, 1784	Concord.
1784, *March* 30	*April* 17	Exeter.
June 2	June 15	Concord.
Oct. 20	*Nov.* 11	Portsmouth.
1785, *Feb.* 9	*Feb.* 25, 1785	Concord.
June 1	June 24	Portsmouth.
Oct. 19	*Nov.* 10	Concord.
1786, *Feb.* 1	*March* 4, 1786	Portsmouth.
June 7	June 27	Concord.
Sept. 6	*Sept.* 23	Exeter.
Dec. 13	*Jan* 18, 1787	Portsmouth.
1787, June 6	June 30	Concord.
Sept. 12	*Sept.* 29	Charlestown.

* Adjourned to meet June 7.

† Specially summoned by the Committee of Safety.

‡ "Third Session."

§ "Third Session," adjourned to meet 2d Wednesday in September.

‖ "Fourth Session," adjourned to meet Nov. 7.

¶ "Fifth session."

Convened.	Adjourned.	Place of Session.
1787, *Dec.* 5	*Dec.* 15, 1787	Portsmouth.
1788, *Jan.* 23	*Feb.* 13, 1788	Portsmouth.
June 4	June 18	Concord.
Nov. 5	*Nov.* 13	Concord.
Dec. 24	*Feb.* 7, 1789	Exeter.
1789, June 3	June 19	Concord.
Dec. 23	*Jan.* 26, 1790	Portsmouth.
1790, June 2	June 19	Concord.
1791, *Jan.* 5	*Feb.* 18, 1791	Concord.
June 1	June 17	Concord.
Nov. 30	*Jan.* 6, 1792	Portsmouth.
1792, June 6	June 22	Dover.
Nov. 21	*Dec.* 28	Exeter.
1793, June 5	June 21, 1793	Concord.
Dec. 25	*Feb.* 22, 1794	Exeter.
1794, June 4	June 21	Amherst.
Dec. 16	*Jan.* 16, 1795	Concord.
1795, June 3	June 18	Hanover.
Dec. 2	*Jan.* 1, 1796	Concord.
1796, June 1	June 17	Exeter.
Nov. 23	*Dec.* 16, 1796	Concord.
1797, June 7	June 22, 1797	Concord.
Nov. 22	*Dec.* 21	Portsmouth.
1798, June 6	June 20, 1798	Hopkinton.
Nov. 21	*Dec.* 28	Concord.
1799, June 5	June 15, 1799	Concord.
Dec. 4	*Dec.* 31	Exeter.
1800, June 4	June 16, 1800	Concord.
Nov. 19	*Dec.* 10	Concord.
1801, June 3	June 17, 1801	Hopkinton.
1802, June 2	June 18, 1802	Concord.
1803, June 1	June 11, 1803	Concord.
Nov. 23	*Dec.* 30	Concord.
1804, June 6	June 21, 1804	Concord.
Nov. 21	*Dec.* 14	Concord.
1805, June 5	June 19, 1805	Concord.
Dec. 4	*Dec.* 31	Portsmouth.
1806, June 4	June 20, 1806	Hopkinton.
1807, June 3	June 19, 1807	Hopkinton.
1808, June 1	June 14, 1808	Concord.
Nov. 23	*Dec.* 23	Concord.

Convened.	Adjourned.	Place of Session.
1809, June 7	June 28, 1809	Concord.
1810, June 6	June 27, 1810	Concord.
1811, June 5	June 21, 1811	Concord.
1812, June 3	June 19, 1812	Concord.
Nov. 18	*Dec. 18*	Concord.
1813, June 2	June 24, 1813	Concord.
Oct. 27	*Nov. 5*	Concord.
1814, June 1	June 24, 1814	Concord.
1815, June 7	June 29, 1815	Concord.
1816, June 5	June 29, 1816	Concord.
Nov. 20	*Dec. 27*	Concord.
1817, June 4	June 28, 1817	Concord.
1818, June 3	June 30, 1818	Concord.
1819, June 2	July 2, 1819	Concord.
1820, June 7	June 23, 1820	Concord.
Nov. 15	*Dec. 23*	Concord.
1821, June 6	June 30, 1821	Concord.
1822, June 5	July 4, 1822	Concord.
1823, June 4	July 3, 1823	Concord.
1824, June 2	June 16, 1824	Concord.
Nov. 17	*Dec. 22*	Concord.
1825, June 1	July 2, 1825	Concord.
1826, June 7	July 8, 1826	Concord.
1827, June 6	July 7, 1827	Concord.
1828, June 4	June 19, 1828	Concord.
Nov. 19	*Jan. 3*, 1829	Concord.
1829, June 3	July 4,	Concord.
1830, June 2	July 3, 1830	Concord.
1831, June 1	July 2, 1831	Concord.
1832, June 6	June 23, 1832	Concord.
Nov. 21	*Jan. 5*, 1833	Concord.
1833, June 5	July 6	Concord.
1834, June 4	July 5, 1834	Concord.
1835, June 3	June 27, 1835	Concord.
1836, June 1	June 18, 1836	Concord.
Nov. 23	*Jan. 14*, 1837	Concord.
1837, June 7	July 8	Concord.
1838, June 6	July 5, 1838	Concord.
1839, June 5	July 6, 1839	Concord.
1840, June 3	June 20, 1840	Concord.
Nov. 18	Dec. 24	Concord.

Convened.	Adjourned.	Place of Session.
1841, June 2	July 3, 1841	Concord.
1842, June 1	June 24, 1842	Concord.
Nov. 2	*Dec. 23*	Concord.
1843, June 7	July 1, 1843	Concord.
1844, June 5	June 19, 1844	Concord.
Nov. 20	*Dec. 28*	Concord.
1845, June 4	July 3, 1845	Concord.
1846, June 3	July 10, 1846	Concord.
1847, June 2	July 3, 1847	Concord.
1848, June 7	June 24, 1848	Concord.
Nov. 22	*Jan. 4*, 1849	Concord.
1849, June 6	July 7	Concord.
1850, June 5	July 13, 1850	Concord.
1851, June 4	July 5, 1851	Concord.
1852, June 2	June 19, 1852	Concord.
Nov. 17	*Jan 8*, 1853	Concord.
1853, June 1	July 2	Concord.
1854, June 7	July 15, 1854	Concord.
1855, June 6	July 14, 1855	Concord.
1856, June 4	July 12, 1856	Concord.
1857, June 3	June 27, 1857	Concord.
1858, June 2	June 26, 1858	Concord.
1859, June 1	June 28, 1859	Concord.
1860, June 6	July 4, 1860	Concord.
1861, June 5	July 4, 1861	Concord.
1862, June 4	July 10, 1862	Concord.
1863, June 3	July 10, 1863	Concord.
1864, June 1	July 16, 1864	Concord.
Aug. 9	*Sept. 1*	Concord.
1865, June 7	July 1, 1865	Concord.
1866, June 6	July 7, 1866	Concord.
1867, June 5	July 6, 1867	Concord.
1868, June 3	July 4, 1868	Concord.
1869, June 2	July 9, 1869	Concord.
1870, June 1	July 2, 1870	Concord.
1871, June 7	July 15, 1871	Concord.
1872, June 5	July 4, 1872	Concord.
1873, June 4	July 3, 1873	Concord.
1874, June 3	July 10, 1874	Concord.
1875, June 2	July 3, 1875	Concord.
1876, June 7	July 21, 1876	Concord.

Convened.	Adjourned.	Place of Session.
1877, June 6	July 19, 1877	Concord.
1878, June 5	Aug. 17, 1878	Concord.
1879, June 4	July 19, 1879	Concord.
1881, June 1	Aug. 19, 1881	Concord.
1883, June 6	Sept. 15, 1883	Concord.
1885, June 3	Aug. 29, 1885	Concord.
1887, June 1	Nov. 5, 1887	Concord.
1889, June 5	Aug. 16, 1889	Concord.

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Abbot, Daniel, — Dunstable:
Oration, July 4, 1803.
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School Books: Arithmetic, Geography, Agricultural Reader, etc.
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Sermon on the Death of Washington, 1800.
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Oration, July 4, 1814.

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Ordination Sermon, 1802.
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Oration, July 4, 1828.
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History of New Hampshire, 3 vols., 8vo., 1784, 1791, 1792.
American Biography, 1794, 1798.
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Oration.
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Thanksgiving Sermon, November, 1826.
Election Sermon, 1828.

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Poem before the Phi Beta Kappa, Dart. Coll., 1803.

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Address before the Handellian Society, 1806.
Election Sermon, 1821.

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STATISTICS

RELATING TO

PUBLIC LIBRARIES

OF

THREE HUNDRED VOLUMES AND UPWARD,

IN

NEW HAMPSHIRE,

INCLUDING SCHOOL LIBRARIES, ETC.,

OCT. 1, 1890.

Statistics Relating to Public Libraries in New Hampshire.

The accompanying table of statistics is based upon a report of the Commissioner of Education of the United States, printed in 1886. About thirty libraries are added to that list, and much of the other matter is brought down to date; while several libraries which have ceased to exist are dropped from the list. The names of librarians did not in any case appear in the report of the commissioner referred to above. These have been added from replies to circulars issued by the state librarian. The incompleteness of these returns illustrates the necessity, in order to make work in this line valuable, of an act of the Legislature authorizing some state agency to enforce returns regarding the same. The clerks of the several towns might be directed by law to make such yearly returns to the state library. But, in view of the difficulty of enforcement of the act which does exist, directing the clerks of towns, and of other corporations, to file their printed reports for each year in the state library (Pamphlet Laws, chap. 7, sects. 2 and 3), it is well to suggest that, if such new act be considered expedient, some adequate penalty for non-compliance therewith be made a part of it.

When, in the following table, the figures denoting the number of volumes are in Italics, the statistics are taken from reports collected at date. Otherwise, they are taken upon authority of the report of the United States Bureau of Education. In a few cases the name of the chairman of the board of library directors appears when that of the librarian could not be obtained. Corrections and additions to this list are desired. Address, State Library, Concord, N. H.

STATISTICS RELATING TO PUBLIC LIBRARIES IN NEW HAMPSHIRE.

Place.	Name of Library.	Founded.	Free or subscription.	Class.	No. vols.	Name of Librarian.	Amt. of annual public appropriation, if any.
Acworth.	Circulating Library.	1878	Subs.	Social.	*600*	W. S. Allen.	
Alexandria.	Haynes Public Library.	1885	Free.	General.	*810*	Clara G. Bullock.	$1,000.00
Amherst.	Town Library.	1855	Free.	General.	1,232		[for establishment.]
Andover.	Proctor Academy Library.			School.	*1,000*	True W. White.	
Antrim.	Antrim Library.	1866	Subs.	General.	450		
Ashland.	Town Library.	1871	Free.	General.	1,028		
Atkinson.	Atkinson Academy Library.	1789	Free.	School.	1,500		
Bennington.	Town Library.				*700*	Mrs. E. I. Dodge.	25.00
Bethlehem.	Bethlehem Library.				*1,228*	Benjamin Tucker.	
Bradford.	Bradford Library.				*353*	Frank H. Howe.	
Bristol.	Minot-Sleeper Library.	1885	Free.	General.	*2,000*	Maud Heath.	500.00
Brookline.	Brookline Public Library.	1878	Free.	General.	*1,260*	Mabel S. Tucker.	100.00
Canaan.	Canaan Library Association.				*600*	Mrs. Harriet Barney.	
Candia.	Smyth Public Library.				*500*	Frank E. Page.	50.00
Candia.	Farmers & Mechanics' Library.		Subs.	Social.	300		
Center Strafford.	Austin Academy Library.			School.	500		
Chester.	Ladies' Library Association.				*860*	Mary B. Noyes.	
Claremont.	Fiske Free Library.	1873	Free.	General.	*6,000*	Abbie Field.	250.00
Claremont.	Stevens High School Library.			School.	350		
Colebrook.	Colebrook Public Library.				*2,000*	Mary Bedell.	400.00
Concord.	Library of N. H. Insane Asylum.	1855	Free.	A. & R.*	*1,900*		100.00
Concord.	Library of N. H. Board of Agriculture.	1872		Scientific.	*1,000*	N. J. Bachelder.	
Concord.	Library of the N. H. Historical Society.	1822	Free.	Historical.	*11,314*	C. L. Tappan.	500.00
Concord.	Public Library.	1855	Free.	General.	*15,000*	D. F. Secomb.	5,000.00

Concord.	St. Paul's School Library.	1856	Subs.	School.	7,100	C. S. Knox.	
Concord.	State Board of Health Library.	1882	Free.	San. Sci.	1,300	I. A. Watson.	
Concord.	State Department of Public Instruction Library.	1874	Free.		1,200	J. W. Patterson.	
Concord.	State Library.	1818	Free.	General.†	‡ 28,000	A. R. Kimball.	3,000.00
Concord.	Y. M. C. A. Association Library.	1868	Free.	Y. M. C. A.	621	H. M. Purrington.	
Contoocook.	Contoocook Library.	1871	Subs.	General.	1,363	Annie E. Hardon.	
Deerfield Center.	Philbrick-James Library.	1880	Free.	General.	2,000	S. D. Church.	
Derry.	Pinkerton Academy Library.	1860	Free.	School.	300		
Derry Depot.	Leach Library.	1880	Free.		1,980		
Dover.	Public Library.	1883	Free.	General.	14,000	Caroline H. Garland.	3,750.00
Dublin.	Public Library.	1883	Free.	General.	2,197	Minnie E. Leffingwell.	100.00
Dunbarton.	Dunbarton Library Association.				300	Hannah K. Caldwell.	
Durham.	Durham Library Association.	1881	Subs.	Social.	2,700	J. B. Smith.	
East Derry.	Taylor Library.	1878	Free.		2,196	Adaline A. Reynolds.	
East Jaffrey.	Jaffrey Public Library.	1883	Free.	General.	1,300	Mrs. Sophia U. Slason.	200.00
East Rindge.	East Rindge Library.				1,400	Mrs. Cynthia Converse.	
East Rochester.	East Rochester Library.	1885	Subs.	General.	1,027	J. H. Whittier.	150.00
Enfield.	Enfield Library Association.	1882	Subs.	General.	566	Stella M. Huse.	
Exeter.	Phillips Exeter Academy Library.	1781	Free.	School.	2,000	J. A. Tufts.	
Exeter.	Public Library.	1853		General.	7,000	Frances E. Moulton.	700.00
Exeter.	Robinson's Female Academy Library.	1869	Free.	School.	600		
Farmington.	High School Library.	1878	Free.	School.	300		
Fitzwilliam.	Town Library.	1871	Free.	General.	2,089	Mrs. Alicia Newton.	50.00
Francestown.	Francestown Academy Library.			School.	8,000		
Francestown.	Town Library.	1852	Free.	General.	1,662		
Franklin.	Library Association.	1864	Subs.	General.	2,300	Annie Nesmith.	
Franklin.	Orphans' Home Library.	1871	Free.	A. & R.*	400	Ida M. Robins.	
Franklin Falls.	High School Library.	1875	Free.	School.	345		

* Asylum and Reformatory. † Fiction alone excluded. ‡This is the approximate number on shelves.

STATISTICS RELATING TO PUBLIC LIBRARIES IN NEW HAMPSHIRE. — *Continued.*

Place.	Name of Library.	Founded.	Free or subscription.	Class.	No. vols.	Name of Librarian.	Amt. of annual public appropriation, if any.
Franklin Falls.	Smith Library.	1880	Free.	Social.	2,800	Mary E. Daniell.	
Gilmanton.	Gilmanton Academy Library.			School.	900	S. W. Robertson.	
Goffstown.	Rogers Free Public Library.				813	Isadore Johnson.	$125.00
Gorham.	"Mountaineer."	1881	Free.	Social.	2,000	V. V. Twitchell.	
Great Falls.	Man'fcturers & Village Library.	1840	Subs.	General.	10,000	J. P. Hubbard.	
Great Falls.	Thwing's Circulating Library.	1872	Subs.	Social.	600	A. Thwing.	
Hampton.	Public Library.	1867	Free.	General.	1,650	S. A. Shaw.	100.00
Hampton Falls.	Ladies' Library.	1846	Subs.	Social.	800		
Hancock.	Whitcomb Library.	1860	Free.		1,677		
Hanover.	Dartmouth College Library.	1770	Both.	College.	72,000	M. D. Bisbee.	
Hanover.	Shattuck Observatory Library.	1854	Free.	Scientific.	1,300		
Hanover.	Thayer School of Civil Engineering Library.	1862		Scientific.	2,150		
Harrisville.	Town Library.	1877	Free.	General.	1,350	Laura M. Tuttle.	50.00
Haverhill.	Haverhill Library Association.				1,000	Fannie Buzzell.	
Hebron.	Town Library.				325	Alice M. Wells.	
Henniker.	Henniker Free Public Library.				708	Mrs. E. M. Cogswell.	200.00
Hillsborough.	Fuller Public Library.	1877	Free.	General.	2,604	Mary C. Bixby.	130.00
Hinsdale.	Town Library.	1867	Free.	General.	3,000	Mrs. Frank Stearns.	300.00
Holderness.	School for Boys Library.	1879	Free.	School.	800		
Hollis.	Social Library.	1799	Free.	Social.	2,800		
Hopkinton.	Public Library Association.	1871	Subs.	General.	1,040		
Jackson.	Jackson Public Library.	1880	Free.	General.	1,879	Josie G. Trickey.	
Jefferson.	Rogers Free Public Library.				400	R. B. Eastman.	25.00
Keene.	High School Library.	1876	Free.	School.	304		

Keene.	Public Library.	1875	Free.	General.	7,300	Mrs. L. M. Converse.	1,000.00
Kingston.	Sanborn Seminary Library.		Free.	School.	525	C. H. Clark.	
Laconia.	Public Library.	1878	Free.	General.	4,959	Julia S. Busiel.	600.00
Lake Village.	Hubbard's Circulating Library.	1884	Subs.	Social.	1,000	J. M. Hubbard.	
Lancaster.	Public Library.	1869	Free.	General.	4,500	Mrs. Williams.	
Lebanon.	Town Library.	1868	Subs.	General.	3,000	Emma Morris.	500.00
Littleton.	Littleton Public Library.				3,400	Stella B. Farr.	500.00
Littleton.	Cong'l Sunday-School Library.				559		
Lisbon.	Lisbon Village Library.	1865	Subs.	General.	1,843	Nettie L. Kelsea.	
Londonderry.	Leach Library.				2,500	I. Taggart.	
Lyman.	Ladies' Library Association.	1871	Subs.	Social.	300		
Lyme.	Turner Social Library.	1850	Subs.	Social.	2,500	P. E. Fairfield.	
Lyndeborough.	Franklin Library Association.	1851	Subs.		482	S. N. Hartshorn.	
Manchester.	Art Association.	1871	Free.	Social.	700	Hattie E. Brown.	
Manchester.	City Library.	1854	Free.	General.	31,315	Mrs. M. J. Buncher.	4,000.00
Manchester.	Governor Smyth Library.	1884	Free.		300		
Manchester.	State Industrial School.	1857	Free.	School.	500		
Manchester.	Y. M. C. A. Library.			Y. M. C. A.	300		
Marlborough.	Frost Free Library.	1866	Free.	General.	4,550	Mrs. H. H. Pease.	100.00
Marlow.	Town Library.	1877	Free.	General.	662	E. N. Howe.	50.00
Meredith.	Meredith Public Library.				1,830	Virginia B. Ladd.	200.00
Meriden.	Kimball Union Academy Library.			School.	2,200	W. H. Cummings.	
Meriden.	Philadelphian Society Library.		Free.	Society.	1,000		
Milford.	Milford Free Library.	1868	Free.	General.	4,000	Ellen L. Cochrane.	300.00
Mont Vernon.	Appleton Library.	1850	Free.		951		
Mont Vernon.	McCollom Institute Library.			School.	1,000		
Nashua.	Public Library.	1868	Free.	General.	10,000	Harriet Crombie.	2,500.00
Nelson.	Free Library.	1881	Subs.	General.	347		
New Durham.	W. C. T. U. Library.				300	Joseph T. Ayers.	
New Hampton.	New Hampton Literary Institution, Literary Adelphi Library.	1827	Free.	Society.	1,278		
New Hampton.	Social Fraternity Library.		Free.	Society.	4,000		

STATISTICS RELATING TO PUBLIC LIBRARIES IN NEW HAMPSHIRE. — *Continued.*

Place.	Name of Library.	Founded.	Free or subscription.	Class.	No. vols.	Name of Librarian.	Amt. of annual public appropriation, if any.
Newington.	Cong'l Sunday-School Library.				307	H. G. Pickering.	
New Ipswich.	New Ipswich Library.				1,650	Frances C. Barr.	
New London.	Colby Academy Library.		Free.	School.	2,854	Mary E. Burpee.	
Newmarket.	Newmarket Library.	1880	Free.	General.	2,200	J. L. Elkins.	$250.00
Newport.	Richards Free Library.				3,033	Anne Parmelee.	
Newport.	Social Library.	1803	Subs.	Social.	350		
Newton.	Pressey & Heath's Circulating Library.	1878	Subs.	Social.	304		
Northumberland.	Town Library.				436	M. Addie Chessman.	
Northwood Center.	Coe's Academy Library.			School.	400		
Northwood Ridge.	Northwood Seminary Library.			School.	500		
Ossipee.	Village Library.				300	J. O. Gerry.	
Pembroke.	Pembroke Academy Library.			School.	800	Isaac Walker.	
Peterborough.	Town Library.	1834	Free.	General.	6,185	Mrs. F. H. Coffin.	125.00
Plymouth.	State Normal School Library.			School.	450		
Plymouth.	Young Ladies' Library Ass'n.	1873	Subs.	Social.	2,050	Martha Leverett.	
Portsmouth.	Free Public Library.	1881	Free.	General.	9,384	R. E. Rich.	1,250.00
Portsmouth.	Goodrich's Circulating Library.						
Portsmouth.	Portsmouth Athenæum Library.	1817	Subs.	General.	16,445	Mrs. C. S. Drake.	
Reed's Ferry.	Institute Library.		Free.	School.	500	Guy Griffin.	
Rochester.	Social Library.	1792	Subs.	Social.	2,500	Henry Kimball.	
Rochester.	Worcester & Greenfield's Lib'ry.	1877	Subs.	Social.	700	H. L. Worcester.	
Sandwich.	Sandwich Library Association.				695	A. B. Tasker.	
Shaker Village.	Shaker Community Library.	1854		Social.	2,000		
Suncook.	Pentagon Circulating Library.	1875	Subs.	Social.	1,500	Joseph Wilkins.	

Surry.	Reed Free Library.	1881	Free.	General.	1,837	Mary E. Field.	60.00
Sutton.	Sutton Library.				440	O. M. Humphrey.	
Swanzey.	Mt. Cæsar Union Library.	1879	Subs.		600		
Temple.	Town Library.				471	Cora E. Haley.	50.00
Tilton.	Tilton & Northfield Library.				3,200	L. F. Batchelder.	300.00
Tilton.	N. H. Conference Seminary.	1845	Free.	School.	500		
Union.	Village Library Association.	1854	Subs.	General.	600		
Wakefield.	Wakefield Village Library.	1880	Free.	General.	1,000	G. A. Yeaton.	
Walpole.	Town Library.		Free.	General.	4,000	Louisa B. Hayward.	240.00
Warner.	Simonds Free High School Library.				1,032	Mary B. Harris.	
Warren.	Ladies' Library Association.	1853	Subs.	Social.	420		
Washington.	Shedd Free Library.	1869	Free.	General.	2,178	Clara H. M. Hurd.	50.00
Wentworth.	Wentworth Public Library.		Subs.	General.	645	Laura B. Ellsworth.	
West Lebanon.	Library Association.	1869	Subs.	Social.	1,000	M. J. Tilden.	
West Lebanon.	Tilden Library.	1854	Subs.	School.	1,400	E. H. Barstow.	
Westmoreland.	Westmoreland Library.				724	Mrs. M. E. Shelley.	100.00
WestSwanzey.	Stratton Free Library.	1885	Free.	General.	2,418		
Whitefield.	Whitefield Circulating Library.				850	Ida M. Quimby.	100.00
Wilton.	Wilton Public Library.				1,664	Martha A. Putnam.	500.00
Winchester.	Winchester Public Library.	1876	Free.	General.	3,176	Mrs. M. L. Pierce.	300.00
Windham.	Nesmith Library.	1871	Free.	General.	2,800	A. L. Anderson.	43.82
Wolfeborough.	Brewster Library.	1867	Subs.	General.	735	G. E. Sleeper.	
Wolfeborough J'n.	Wolfeborough Junction Library.	1883	Subs.		500	F. L. Brackett.	

ENGLISH AND CANADIAN LAW REPORTS DIGESTS, AND STATUTES,

WANTED BY THE STATE LIBRARY OF NEW HAMPSHIRE, OCTOBER 1, 1890.

ENGLISH AND CANADIAN LAW REPORTS WANTED.

PRIVY COUNCIL — APPEALS FROM INDIA. *

	VOLS.
Indian Appeals	8
Supplemental Indian Appeal	1

EARLY ABSTRACTS OF THE LAW REPORTS.

Weekly Notes	16

PRIVY COUNCIL.

Acton	2
Knapp	3
Moore	15
Moore (New Series)	9

PRIVY COUNCIL — EAST INDIAN APPEALS.

Moore — Indian Appeals	14
Law Reports: Supplemental Indian Appeals	1
Law Reports: Indian Appeals	7

COURT OF CHANCERY.

Regular Series.

Reports in Chancery	1

Collateral Reports.

Equity Reports	3

* This arrangement follows the list of reports, etc., contained in Soule's "Lawyers' Reference Manual," 1883. Hence the number of volumes is given as they existed at that date.

BANKRUPTCY.

Regular Series.

Rose	2

Collateral Reports.

Gazette of Bankruptcy	4

Insolvency Cases.

Cresswell	1
Macrae & Hertslet	1

KING'S (OR QUEEN'S) BENCH.

Routuli Curiae Regis	2

THE COURT OF COMMON PLEAS.

Regular Series.

Practical Register	1

Collateral Reports.

Hodges	3

REGISTRATION APPEAL CASES.

Pigot & Rodwell	1
Lutwyche	2
Keane & Grant	1
Hopwood & Philbrick	1
Hopwood & Coltman	2

Collateral Reports.

Cox & Atkinson	1

ECCLESIASTICAL, PROBATE, AND DIVORCE.

Collateral Reports.

Notes of Cases	7

ADMIRALTY.

Swabey	1
Lushington	1
Browning & Lushington	1

Collateral Reports.

Notes of Cases	7
Maritime Cases — Crockford	3
Maritime Cases (New Series) — Aspinwall	3
Holt — Admiralty Cases	1

NISI PRIUS REPORTS.

Clayton	1

PRACTICE REPORTS AND BAIL COURT.

Cases of Practice	1
Wollaston	1
New Practice Cases	3

Under the Judicature Acts.

Bittleston's Practice Cases	1
Charley's New Practice Cases	3

MERCANTILE CASES.

Danson & Lloyd	1
Lloyd & Welsby	1

PATENT CASES.

Davies	1
Carpmael	2

MAGISTRATES' CASES.

Nolan	1
Dowling & Ryland	4
Nevile & Manning	3
Nevile & Perry	1
New Magistrates' Cases	4

SETTLEMENT CASES.

Cases of Settlement	1

POOR LAW CASES.

Lumley	1
Foley	1
Pratt (or Bott)	2
Griffith	1

TITHE CASES.

Eagle & Younge	4
Gwillim	4
Western	1
Rayner	3
Wood	4

COUNTY COURT CASES.

County Courts Chronicle	13
County Courts Reports (New Series)	14
Cox, Macrae & Hertslet	1
County Court Cases	3
Austin	1

MISCELLANEOUS.

Star Chamber Cases	1
Special & Selected Law Cases	1
Select Cases relating to Evidence	1
Cases and Opinions	2
Rowe	1
Cripps — Church and Clergy Cases	1

ARBITRATION CASES.

Albert Arbitration — Reilly	1
European Assurance Arbitration — Marrack	1
European Arbitration — Reilly	1

PARLIAMENTARY.

Hatsell's Precedents	4
Bourke's Parliamentary Precedents	1
Clifford & Stephens	2
Clifford & Rickards	2

ELECTION CASES.

Glanville	1
Tomlin's Cases of Evidence	1
Douglas	4
Philipps	1
Fraser	2
Luders	3
Peckwell	2
Corbett & Daniell	1
Cockburn & Rowe	1
Perry & Knapp	1
Knapp & Ombler	1
Falconer & Fitzherbert	1
Barron & Austin	1
Barron & Arnold	1
Power, Rodwell & Dew	2
Wolferstan & Dew	1
Wolferstan & Bristowe	1
O'Malley & Hardcastle	3

COURTS OF REVISION.

Manning	1
Delane	1

REPORTS IN ALL THE COURTS.

The Common Law Report	3 in 5
The Equity Reports	3 in 5
The New Reports	6

LAW JOURNAL REPORTS.

The Law Journal (Old Series)	9
The Law Journal Reports (New Series)	51
The Law Times Reports	1843 to date
Weekly Reporter	29

DIGESTS.

House of Lords.

Clark's Digested Index	1

STATUTES.

The Statutes-at-Large, by Pickering	109
The Statutes-at-Large from Magna Charta to the thirtieth year of King George the Second, by the late John Cay, Esq., London, 1758, volumes 2 and 6	2

DOMINION OF CANADA.

UPPER CANADA (NOW ONTARIO).

Appeal Cases.

Error & Appeal Reports	3
Ontario Appeal Reports	6

Chancery.

Grant	29
Chancery Chambers Reports	4

King's or Queen's Bench.

Taylor	1
Draper	1
King's Bench (Old Series)	6
Queen's Bench, want 1–12	12

Common Pleas.

Upper Canada Common Pleas	32

Municipal Courts.

Harrison & Hodgin	1

Practice Reports.

Chamber Reports	2
Practice Reports	9
Ontario Practice Reports.	

Election Cases.

Patrick	1
Hodgin	1

Law Journals.

Upper Canada Law Journal	10
Canada Law Journal	18
Local Courts and Municipal Gazette	8
Canadian Law Times	2

Latest Digest.

Robinson & Joseph	2

LOWER CANADA (NOW QUEBEC).

Reports.

Pyke	1
Stuart — King's Bench	1
Stuart — Vice-Admiralty	2
Lower Canada Reports, want 1–5	5
Lower Canada Reports — Seignioral Question	2
Quebec Law Reports	8
Queen's Bench Reports	1

Law Journals.

Revue de Legislation	3
Law Reporter Montreal Condensed Reports	1
Lower Canada Jurist	26
Lower Canada Law Journal	4

Revue Légale	11
Revue Critique	3
Legal News	5
La Thémis	3

Latest Digest.

Quebec Law Digest	2

NOVA SCOTIA.

Supreme Court Reports.

Law Reports — Thomson	1
James	1
Thomson	1
Cochrane	1
Oldright	2
Nova Scotia Decisions	3
Russell & Chesley	3
Russell & Geldert	2

Equity Cases.

Russell & Chesley	1

Admiralty Reports.

Stewart — Vice-Admiralty	1
Young — Admiralty Decisions	1

NEW BRUNSWICK.

Reports (Supreme Court).

Chipman	1
Berton	1
Kerr	3
Allen	6
Hannay	2
Pugsley	3
Pugsley & Burbidge	4
New Brunswick Reports	1

Latest Digest of Reports.

Stevens 2

Latest Revision of Laws.

Consolidated Statutes 1

MANITOBA.

Latest Revision of Statutes.

Consolidated Statutes 1

BRITISH COLUMBIA.

Latest Revision of Laws.

Revised Statutes 1

PRINCE EDWARD'S ISLAND.

Reports.

Haviland (Peters) 1

NEWFOUNDLAND.

Reports.

Select Cases 1

Latest Revision of Laws.

Consolidated Reports 1

ASSOCIATION OF STATE LIBRARIANS

Officers and Resolutions.

Association of State Librarians. — Officers and Resolutions.

OFFICERS.

Melvil Dewey, Albany, N. Y., *President.*

W. H. H. Taylor, St. Paul, Minnesota, *Vice-President.*

C. C. Pickett, librarian of the Chicago (Ill.) Law Institute, *Secretary.*

RESOLUTIONS ADOPTED BY THE ASSOCIATION OF STATE LIBRARIANS.

On State Legislation.

Whereas, The laws governing the libraries of the several States and Territories have been formed for each without regard to any other, or to any uniformity among them, and this diversity of legislation has resulted in many ways in great loss to said libraries, and has greatly retarded their growth and prevented the increase of their usefulness; and

Whereas, The State of California has, by resolution of her Legislature, instructed her librarian to call a conference of the librarians of the several States and Territories for the purpose of securing the adoption of an approximately uniform system of laws, rules, and regulations for the government and control of such libraries;

Now therefore, we, the librarians of the several States and Territories, in such conference assembled, *Do Resolve:*

1. That each State should provide for the maintenance of a state library, by creating a fund that should be continuous and not dependent upon annual or biennial appropriations.

2. That the salary of each state librarian should be made proportionate to the salaries paid other state officers in the same

State, and that tenure of office should be made dependent on efficiency solely, and not on changes of administration, political or otherwise.

3. That each State should provide by law for the speedy transmission, under the direction of the state librarian, to all state libraries and to foreign governments, of all public documents, reports, laws, transactions, etc., published by authority, and that these be addressed directly to the libraries.

4. That each State should provide by law,—

(*a*) That all books published under its authority be properly indexed by a uniform topical alphabet, preserving the same heads of reference from year to year;

(*b*) That the title pages of all statutes and journals of the Legislature show the dates of convening and final adjournment of the sessions;

(*c*) That law reports give the extreme dates of the decisions on the title pages, and the date of the rendition of each decision above the title of each case;

(*d*) That each volume of law reports contain a table of cases, plaintiff and defendant, and *vice versa;*

(*e*) That the name of the State, with year and number of the Legislature where practicable, be lettered on the back of every volume.

5. That each State provide for the proper cataloguing and indexing, under the direction of the state librarian, of all publications that have been or may be issued by authority of the State.

6. That each State provide for the preparation and publication of a list of the sessions of its Legislature, from the first session to date, stating the time of the convening and adjourning of each session.

7. That each State provide for the proper exchange and disposition of duplicate books.

8. That the governor of each State and Territory be respectfully requested to submit the foregoing resolutions to its Legislature, and to urge upon it the adoption of the laws necessary to carry out the reforms therein recommended, and also to impress upon it the propriety of adopting memorials to Congress in favor of the federal legislation hereinafter suggested.

On National Legislation.

WHEREAS, The national government has thus far not given to the state and territorial libraries the aid and assistance which it is desirable should be given, therefore be it

Resolved, That Congress should provide, —

1. For free transportation by mail of books and all printed matter between state libraries.

2. By international arrangement for free transportation of books and other printed matter between state libraries and departments of foreign governments.

3. For a lower rate of postage on books.

4. That the privilege now enjoyed by the library of Congress, and by societies, colleges, and schools, in the exemption of books from import duties, should be extended to state libraries.

Resolved, That the President of the United States be respectfully requested to bring these matters to the attention of Congress.

LIST OF STATE LIBRARIANS,

OCTOBER 1 1890.

LIST OF STATE LIBRARIANS,

OCTOBER 1, 1890.

State.	City.	Name of Librarian.
Alabama.	Montgomery.	Junius M. Riggs.
Arkansas.	Little Rock.	B. B. Chism. *
California.	Sacramento.	W. D. Perkins.
Colorado.	Denver.	L. S. Cornell.
Connecticut.	Hartford.	Charles J. Hoadly.
Delaware.	Dover.	Samuel D. Smith.
Florida.	Tallahassee.	John L. Crawford.
Georgia.	Atlanta.	Jonn Milledge.
Illinois.	Springfield.	Isaac N. Pearsons. *
Indiana.	Indianapolis.	J. P. Dunn, Jr.
Iowa.	Des Moines.	Mrs. Mary A. Miller.
Kansas.	Topeka.	H. J. Dennis.

* *Ex officio* (Secretary of State).

State.	City.	Name of Librarian.
Kentucky.	Frankfort.	E. P. Thompson.
Louisiana.	Baton Rouge.	Mrs. Cecile Hamilton.
Maine.	Augusta.	Josiah S. Hobbs.
Maryland.	Annapolis.	Edmund P. Duval.
Massachusetts.	Boston.	C. B. Tillinghast.
Michigan.	Lansing.	Harriet A. Tenney.
Minnesota.	St. Paul.	W. H. H. Taylor.
Mississippi.	Jackson.	Mrs. M. Morancy.
Missouri.	Jefferson City.	W. J. Zevely.
Nebraska.	Lincoln.	Guy A. Brown.
Nevada.	Carson City.	H. C. Davis. *
New Hampshire.	Concord.	A. R. Kimball.
New Jersey.	Trenton.	M. R. Hamilton.
New York.	Albany.	Melvil Dewey.
North Carolina.	Raleigh.	J. C. Birdsong.
Ohio.	Columbus.	Frank N. Beebe.
Oregon.	Salem.	J. B. Putnam.
Pennsylvania.	Harrisburg.	William H. Egle.
Rhode Island.	Newport and Providence.	Samuel H. Cross. †
South Carolina.	Columbia.	James T. Sims.

* *Ex officio* (Lieut. Governor).
† *Ex officio* (Secretary of State).

State.	City.	Name of Librarian.
Tennessee.	Nashville.	Mrs. S. P. Lowe.
Texas.	Austin.	
Vermont.	Montpelier.	Hiram A. Huse.
Virginia.	Richmond.	C. Poindexter.
West Virginia.	Charleston.	E. L. Wood. *
Wisconsin.	Madison.	John R. Berryman.

* *Ex officio* (Adjutant-General).

ADDENDA.

On page 113 add :

1848.

ADJOURNED SESSION. PAGE

Journal of Committee on Apportionment of Public Taxes 561
Report of Railroad Commissioner relative to Great Falls & Conway Railroad 583

On page 115 add :

1852.

ADJOURNED SESSION.

Abstracts of County Inventories 515
Report of Bank Commissioner relative to Cochecho Bank 525
Eulogy upon Daniel Webster, by Ira Perley 526

List of Articles Contained in the Appendix.

	Page
New Hampshire Official Publications, 1889–90	91
Reports of State Officers, etc., 1822–89	97
Regimental Historians, War of the Rebellion	141
Check-List of New Hampshire Laws, 1789–1889	147
Sessions of Legislature, 1776–1889	155
Author-List of New Hampshire, 1829	163
Statistics relating to Libraries in New Hampshire	181
List of English and Canadian Reports, etc., wanted by the State Library, October 1, 1890	191
Officers and Resolutions of the Association of State Librarians	203
List of State Librarians	209

ANNUAL REPORTS

OF THE

TRUSTEES, SUPERINTENDENT, AND TREASURER

OF THE

INDUSTRIAL SCHOOL

OF THE

STATE OF NEW HAMPSHIRE,

TO THE

GOVERNOR AND COUNCIL,

JANUARY, 1891.

MANCHESTER:
JOHN B. CLARKE, PUBLIC PRINTER.
1890.

OFFICERS.

TRUSTEES.

J. W. PEPPARD, Esq., *President* . . .	Plymouth.
Hon. DANIEL CLARK, *Secretary* . .	Manchester.
D. W. JOHNSON, Esq.	Claremont.
D. W. BILL, Esq.	Gilsum.
Hon. J. C. LINEHAN	Penacook.
O. S. BROWN, Esq.	Salmon Falls.
Mrs. OLIVE RAND CLARKE . . .	Manchester.

SUPERINTENDENT AND TREASURER.

JOHN C. RAY.

MATRON.

Mrs. JOHN C. RAY.

TEACHERS.

Miss B. F. SCOVILLE. Miss JOSEPHINE MITCHELL.

TRUSTEES' REPORT.

To His Excellency the Governor of the State of New Hampshire, and the Honorable Council:

The Trustees of the Industrial School make report, transmitting the report of the Superintendent, which shows the financial condition and general prosperity of the institution, up to the 1st day of December, inst., and needs not be repeated by them. To a portion of that report, however, the trustees desire to call the attention of the Governor and Council, and particularly of the Legislature.

For several years past, the State has had at the school a very fine herd of cattle, one of the best, supplying all its needs; but last July tuberculosis made its appearance in this herd, and progressed so rapidly that it became necessary to destroy it almost entirely to arrest and eradicate the disease. Forty head were slaughtered, and the institution is now entirely destitute of that means of support, and it becomes necessary for the Legislature to furnish funds for procuring another herd. Tuberculosis is a frightful disease in a herd of cattle, and demands ready and decisive action. It is so infectious that it brooks no delay of treatment, and in a herd so large and valuable as that at the school, its eradication imposed grave responsibilities upon the superintendent. He acted promptly, and the trustees feel that he did so prudently and wisely. He called the best veterinary assistance that could be found, and followed their advice as to the best course to be pursued. He details in his report the history and progress of the disease, and from that may be obtained pretty full information of the grave necessities of the situation. He seems to have followed the requirements of the law in regard to infectious diseases among cattle, and it remains with the Legislature to take such steps as shall best remedy the evil that has befallen the school. The trustees feel confident it will do so.

DANIEL CLARK,

Secretary of the Board of Trustees.

OCTOBER 1, 1890.

REPORT

OF THE

SUPERINTENDENT AND TREASURER.

To His Excellency the Governor, the Honorable Council, and the Honorable Board of Trustees:

I respectfully submit for your examination the annual report of the State Industrial School for the year ending March 31, 1890:

Whole number committed to the institution since its organization in 1858	1,390
Number in school April 1, 1889	116
Whole number in school during the year	152
Number discharged at expiration of sentence	27
Number discharged on probation	11
Number honorably discharged	5
Number escaped	3
Number of deaths	1
Number in school March 31, 1890	105
Average detention of those discharged	2½ yrs.

PARENTAGE.

American	46
Irish	55
French	37
Scotch	3
German	2
Norwegian	1
Negro	6
Indian	1
Russian	1

HOW COMMITTED.

Number committed by supreme court	37
" " police court	77
" " justices of peace	37
" " parents	1

TERM OF COMMITMENT.

During minority	41
For the term of 8 years	2
" " 6 years	1
" " 5 years	17
" " 4 years	10
" " 3¼ years	1
" " 3 years	34
" " 2 years	21
" " 1½ years	4
" " 1 year	20
Until 18	1

OFFENCE.

For stealing	69
breaking and entering	26
stubbornness, idleness, and disobedience	21
truancy	11
assault	3
lewdness	6
robbery of person	1
malicious mischief	5
incendiarism	3
drunkenness	2
stealing horses	3
receiving stolen goods	1
being indecent and disorderly	1

AGE WHEN COMMITTED.

At the age of 8 years	4
" " 9 years	2
" " 10 years	12

At the age of 11 years	13
" " 12 years	18
" " 13 years	32
" " 14 years	20
" " 15 years	28
" " 16 years	23

STATISTICS OF SCHOOL FROM APRIL 1 TO OCTOBER 1, 1890.

Whole number committed to the institution since its organization in 1858	1,428
Number in school April 1, 1890	107
Number in school from April 1 to October 1, 1890	137
Number discharged at expiration of sentence	13
Number discharged on probation	3
Number honorably discharged	7
Number escaped	2
Number in school October 1, 1890	112

PRESENT STANDING OF PUPILS IN SCHOOL.

Reading.

	Boys.	Girls.
General Reading	19	8
Reading in United States History	27	2
" Fourth Reader	28	2
" Third Reader	7	2
" Second Reader	6	
" First Reader	3	

Writing.

Instructed in penmanship	91	14

Arithmetic.

Studying cube root	9	8
" percentage	16	1
" fractions	16	1
" denominate numbers	12	
" first principles	25	4

Geography.

Studying Manual of Geography	22	2
" Elementary Geography	34	4

History.

Studying History of England	19	8
" History of United States	27	2

Grammar.

Studying Lessons in English	23	8

Physiology.

Taught orally	46	10

FARM.

The products of the farm are as follows:

125 tons hay	$1,750.00
65 tons corn-fodder	260.00
550 bushels potatoes	250.00
250 bushels ears of corn	70.00
100 bushels carrots	40.00
80 bushels green peas	55.00
65 bushels green beans	50.00
20 bushels cucumbers	20.00
60 bushels tomatoes	15.00
135 bushels sweet corn, ears	100.00
25 bushels turnips	10.00
200 bushels beets	60.00
6,500 heads cabbage	175.00
2,250 pounds pork	135.00
600 heads celery	20.00
1½ tons squash	35.00
1,200 quarts strawberries	100.00
50 barrels apples	50.00
Lettuce, radishes, etc.	15.00
Milk	2,000.00

INVENTORY OF PROPERTY.

16 grade cows	$700.00
5 Short-horn cows, thoroughbred	250.00
1 grade two-year-old heifer	25.00
1 grade heifer calf	12.00
2 Short-horn heifer calves	30.00
11 grade one-year-old Durham heifers	150.00
2 Jersey cows	75.00
1 two-year-old Holstein bull	100.00
23 swine	260.00
4 horses	800.00
2 yokes of oxen	285.00

HAY, PROVISIONS, ETC.

50 tons hay	$750.00
110 bushels potatoes	90.00
25 barrels flour	150.00
Pork	12.00
Kerosene	6.00
Sugar, tea, coffee, molasses, salt, spices, etc.	50.00
25 cords wood	100.00

BOYS' DINING-ROOM AND COOKROOM.

Cooking-stove and baker	$15.00
100 chairs	30.00
Crockery, knives, forks, iron and tin ware	75.00
Tables and table covers	45.00
Bread trough, meat cutter, clock, etc.	12.00
Movable closets, lamps, and lanterns	12.00

FAMILY COOKROOM AND DINING-ROOM.

Franconia range and furniture	$130.00
Stoddard creamery	60.00
Refrigerators	25.00
Dining tables and chairs	40.00
Crockery, knives, forks, tins, etc.	70.00

CHAIR SHOP.

Work stands	$140.00
Clock	2.00

PRINTING-OFFICE.

Press, type, etc.	$70.00

CARPENTER SHOP.

Lathe, carpenters' tools, benches, etc.	$155.00

HOSIERY MILL.

Knitting-machines, etc., and engine	$3,700.00

SHOE SHOP.

Shoes, leather, and findings	$90.00
Lasts, tools, and benches	10.00

GIRLS' SEWING-ROOM.

Work table and cover	$12.00
Chairs and lounge	20.00
Buttons, needles, thread, etc.	12.00
Cloth on hand	100.00
Boys' and girls' clothing	1,000.00
Sewing-machines	110.00

CARRIAGES, WAGONS, AND FARMING UTENSILS.

1 carryall	$100.00
1 rack wagon	15.00
2 horse carts	65.00
2 farm wagons	60.00
2 two-horse wagons	65.00
1 ox cart	40.00
1 express wagon	25.00
3 buggies	100.00
1 large spring wagon	25.00
1 six-horse barge	160.00
2 sleighs	150.00

4 horse sleds	$30.00
12 harnesses, 4 robes	250.00
Stone drags, wheelbarrows, grindstone, 2 seed sowers	25.00
10 plows, 5 harrows, 2 cultivators	100.00
1 Kemp manure spreader	40.00
Iron bars, manure forks, 2 bush scythes, and snaths	15.00
Hay cutter, shovels, spades, hoes, picks	50.00
2 mowing-machines	75.00
Cart wheels, whiffletrees, eveners, and chains	20.00
2 platform scales, hay scale, beams, ropes, and blocks	50.00
Horse rake and tedder, axes, saws, ox-yokes, and chains	35.00
Pitchforks, rakes, drills, wedges, and stone hammer	10.00
Ladders, piping tools, kettles, grain and meal chests	60.00
1 horse power, 1 ensilage cutter, circular saw and frame	125.00

SLEEPING-HALLS.

Bedsteads and bedding	$1,100.00

SCHOOLROOMS.

Settees, desks, and chairs	$140.00
Blackboards, clock, lamps, and hangings	35.00
School books, slates, etc.	50.00
Bookcase and library books	100.00
Cabinet organ	40.00
House plants	25.00

OFFICERS' ROOMS.

Furniture, beds, and bedding	$500.00
12 wardrobes	80.00

OFFICE AND LIBRARY.

Tables, chairs, lounges, desks, safe	$175.00
Books and bookcases	275.00
Stationery and stamps	20.00
Fire extinguishers, fire escape	100.00
Clock, hanging-lamps	40.00

RECEPTION ROOM AND GUEST CHAMBER.

Carpets and curtains	$100.00
Center and side tables, sofas, chairs . . .	140.00
Lamps, cabinet, bookcases, books	80.00
Bed and bedding, etc.	65.00

DETAILED ACCOUNT OF CASH RECEIVED FROM APRIL 1, 1889, TO APRIL 1, 1890.

1889.			
April	1.	From state treasurer, quarterly appropriation	$1,500.00
		Keene, for board	39.00
		Exeter, for board	39.00
		Chester, for board	19.50
	2.	S. K. Pierce & Son, for chair work	112.28
		Mrs. F. C. Dow, for labor on lawn	20.00
		Carroll county, for board . .	19.50
		Cheshire county, for board . .	117.00
	4.	Grafton county, for board . .	97.50
	5.	Croydon, for board . . .	19.50
		H. W. Brown, for 2 bushels potatoes	1.00
	6.	Boston Chair Manufacturing Co., for chair work	54.67
		Rockingham county, for board .	175.50
		James Erskine, for board . .	10.50
		Landaff, for board	19.50
	8.	Salem, for board	19.50
		E. M. Slayton, for hay . . .	119.58
	10.	Higgins Bros., for hay . . .	14.88
	12.	Peterborough, for board . . .	19.50
		Franklin, for board . . .	19.50
		Concord, for board . . .	49.50
		Manchester, for board . . .	643.50
	15.	Nashua, for board	191.14
		New Ipswich, for board . . .	58.50
	20.	Coös county, for board . . .	68.78
	24.	David Wadsworth, for chair work .	48.00
		E. S. Whitney, for hay . . .	10.74
	25.	Peter Riley, for rags . . .	8.87

May	1.	From Strafford county, for board . .	$58.50
	2.	J. W. Peppard, for pigs . . .	8.84
		Mrs. Nathaniel White, to purchase library books	15.00
	3.	Hillsborough county, for board .	292.50
	6.	Portsmouth, for board . . .	82 50
	7.	Mrs. M. F. Dodge, for labor . .	6.00
	8.	F. H. Brickett, for rent . . .	5.00
		G. Clough, for 15 bushels potatoes .	6.00
	17.	Mrs. C. Ferris, for board . .	16.00
	22.	Weare, for board	19.50
	27.	E. S. Whitney, for hay . . .	3.88
	28.	F. H. Brickett, for rent . . .	5.00
June	9.	James McKean Wilkins fund . .	45.00
	15.	James Erskine, for board . .	19.00
	18.	Merrimack county, for board . .	114.00
	24.	Newport, for board . . .	19.50
		F. H. Brickett, for rent . . .	5.00
	29.	James McKean Wilkins fund . .	70.00
		Carl E. York, for cabbage and potatoes	13.04
		cream and milk	8.84
		Manchester Stocking Co., for labor	351.00
July	1.	state treasurer, quarterly appropriation	1,500.00
		Newport, for board . . .	7.00
	2.	Franklin, for board . . .	19.50
	5.	E. M. Slayton, for hay . . .	44.18
		Chester, for board	19.50
	8.	Nashua, for board	204.41
		Cheshire county, for board . .	104.57
		Grafton county, for board . .	97.50
		Keene, for board	39.00
		Exeter, for board	51.00
	9.	Hillsborough county, for board .	280.07
		Weare, for board	10.50
		Salem, for board	19.50
		Croydon, for board . . .	19.50

July	9.	From Portsmouth, for board . . .	$61.29
	15.	Rockingham county, for board .	163.07
		Concord, for board . . .	64.50
	17.	Littleton, for board . . .	58.50
	18.	Manchester, for board . . .	608.36
	30.	New Ipswich, for board . . .	58.50
		Landaff, for board	19.50
Aug.	2.	interest on Miss Louise Penhallow fund	45.00
	9.	Dover, for board	16.50
	12.	Strafford county, for board . .	58.50
	19.	F. H. Brickett, for rent . . .	10.00
		Merrimack county, for board . .	104.50
	21.	Dunn & Salisbury, for chair work .	267.10
		Belknap county, for board . .	19.50
	26.	Osgood Garland, for rent . .	18.70
Sept.	16.	interest on James McKean Wilkins fund	45.00
		interest on Moody Kent fund .	90.00
	21.	sale of junk	.74
	30.	Carl E. York, for vegetables, etc. .	80.16
		Manchester Stocking Co., for labor	475.80
		sale of cream and milk . . .	15.23
Oct.	1.	state treasurer, quarterly appropriation	1,500.00
	2.	Coös county, for board . . .	39.00
		Ex-Gov. Frederick Smyth memorial fund	41.75
		Charles Williams, for hay . .	40.25
	3.	Keene, for board	39.00
	4.	Rockingham county, for board .	214.50
		Littleton, for board . . .	4.50
	5.	Peterborough, for board . . .	39.00
		James Erskine, for board . .	20.00
	7.	Chester, for board	19.50
		Salem, for board	10.93
	8.	Bradford, for board . . .	20.57
		Franklin, for board . . .	2.14

Oct.	8.	From Colebrook, for board . . .	$58.50
	9.	Carroll county, for board . .	39.00
		F. H. Brickett, for rent . . .	5.00
	11.	From Concord, for board . . .	66.00
		Manchester, for board . . .	601.50
	14.	Osgood Garland, for rent . .	7.00
	15.	Nashua, for board	235.63
		New Ipswich, for board . . .	31.50
	16.	Belknap county, for board . .	19.50
		Hillsborough county, for board .	252.00
	17.	Portsmouth, for board . . .	6.64
	19.	Landaff, for board	19.50
	21.	Dunn & Salisbury, for chair work .	196.64
		Pittsfield, for board . . .	58.50
	26.	Dover, for board	19.50
	29.	Strafford county, for board . .	59.78
		Cheshire county, for board . .	96.00
Nov.	1.	Merrimack county, for board . .	97.50
		R. E. Wheeler, for hides . .	35.83
		Daniel Ready, for milk . . .	23.20
	4.	state treasurer, appropriation for beds, building, etc. . . .	2,000.00
	15.	Grafton county, for board . .	94.50
	19.	C. A. Sulloway, for keeping horse .	20.00
		Mr. George, for bushel beets . .	.50
Dec.	3.	sale of two pigs	10.00
	5.	Porter Bros., discount on bill . .	8.10
	7.	Croydon, for board . . .	19.50
	13.	Osgood Garland, for rent . .	14.00
	17.	E. Rowell, for three pigs . .	18.00
	20.	F. L. Burt, for beets . . .	16.57
	30.	Miss F. E. A. Riddle, for clearing lot	65.30
		Gilman Clough, boot between ox and horse	52.00
	31.	interest on James McKean Wilkins fund	45.00
		sale of milk and cream . . .	26.67
		H. W. Brown, for wood . . .	4.00

Dec.	31.	From George R. Brown, for wood and milk	$11.68
		Carl E. York, for vegetables	74.51
		N. H. Agricultural Society, for premiums	54.75
		E. M. Slayton, for hay	45.14
		J. H. Wiggin & Co., for beef	56.94
		Manchester Stocking Co., for labor	450.00
		use of animal one year	5.50
1890.			
Jan.	1.	state treasurer, quarterly appropriation	1,500.00
		J. H. Whitefield, for hay	69.51
		interest on James McKean Wilkins fund	70.00
	2.	Strafford county, for board	78.00
	4.	Rockingham county, for board	209.57
		Dunn & Salisbury, for chair work	232.39
		Hanover, for board	7.28
	6.	Coös county, for board	19.50
		Portsmouth, for board	19.50
		Manchester, for board	626.14
		Concord, for board	57.00
	7.	Salem, for board	19.50
	8.	Grafton county, for board	63.00
		F. L. Burt, for beets	12.50
	10.	Somersworth, for board	18.00
		Carroll county, for board	19.50
		Newport, for board	14.36
		Dr. E. A. Wallace, for hay	16.62
	11.	Cheshire county, for board	77.36
		Keene, for board	39.00
	14.	Hillsborough county, for board	255.86
	16.	Colebrook, for board	19.50
		A. G. Grenier, for hay	32.16
	23.	Fitzwilliam, for board	9.86
	24.	Belknap county, for board	35.57
		A. A. Potter, for hay	8.19

Jan.	29.	From Croydon, for board . . .	$19.50
Feb.	6.	R. E. Wheeler, for hides and tallow	14.27
	8.	Nashua, for board	261.64
	10.	Merrimack county, for board . .	103.50
		Pittsfield, for board . . .	19.50
	11.	Dunn & Salisbury, for chair work .	282.20
		Peterborough, for board . .	19.50
	14.	E. Dodge, for labor of men and team	6.00
	26.	A. Elliott, for beets . . .	.50
Mar.	7.	N. O. Garland, for rent . . .	21.00
		William Alanson, for hay . .	13.89
	19.	Dunn & Salisbury, for chair work .	89.87
	22.	Grafton county, for board . .	7.28
	31.	Mrs. S. M. Davenport, for board .	10.00
		E. M. Slayton, for hay . . .	62.56
		George R. Brown, for wood and milk	10.28
		H. W. Brown, for wood . . .	6.00
		sale of cream and milk . . .	5.75
		Manchester Stocking Co., for labor	548.25

DETAILED ACCOUNT OF CASH RECEIVED FROM APRIL 1 TO OCTOBER 1, 1890.

April	1.	From state treasurer, quarterly appropriation	$1,500.00
	2.	Coös county, for board . . .	19.50
		Manchester, for board . . .	624.00
		Whitefield, for board . . .	39.86
		Hanover, for board . . .	19.50
	8.	Keene, for board	36.00
		Grafton county, for board . .	78.00
	9.	sale of cabbages	10.00
	10.	Hillsborough county, for board .	198.00
	11.	Fitzwilliam, for board . . .	19.50
		Concord, for board . . .	7.50

April	12.	From Rockingham county, for board	$234.00
	14.	Portsmouth, for board	19.50
	15.	Croydon, for board	35.50
		E. S. Whitney, for hay	9.99
	16.	C. T. Allen, for cabbage	2.52
		Carroll county, for board	19.50
		A. G. Grenier, for hay	11.16
		moving goods	1.25
	18.	Nashua, for board	315.00
		J. C. Ray, for 6 bushels potatoes	4.80
	23.	Cheshire county, for board	72.64
	29.	Strafford county, for board	97.50
May	5.	Mrs. S. M. Davenport, for board	10.00
	6.	Coos county, for board	53.50
	10.	George R. Brown, for milk	1.00
	13.	N. O. Garland, for rent	14.00
	14.	T. L. Quimby, for work of oxen	1.50
	16.	Gilman Riddle, for hay	12.11
	22.	Merrimack county, for board	106.50
	23.	Mrs. Charles E. Balch, for moving and setting tree	37.00
	28.	J. O. Clark, for labor	14.70
		T. W. Follansbee, for moving boiler	6.00
June	9.	Mrs. S. M. Davenport, for board	8.00
	11.	Dover, for board	39.00
	12.	sale of pigs	7.00
	13.	Newport, for board	19.50
	21.	Wilkins fund	90.00
	27.	Daniel Farmer, for pig	4.00
	30.	sale of cream	4.86
		E. M. Slayton, for hay	43.03
		I. C. Merrill, for flour and meat	10.21
		Carl E. York, for vegetables	6.95
		Manchester Stocking Co., for labor	846.00
July	1.	state treasurer, quarterly appropriation	1,500.00
		Hanover, for board	19.50
	5.	Alton, for board	14.79
		F. H. Morse, for hay	3.20

July	7.	From Whitefield, for board . . .	$19.50
		Manchester, for board . . .	591.34
	8.	Keene, for board	19.50
		B. C. Hill, for rent and milk . .	7.70
	9.	Portsmouth, for board . . .	30.43
		Mrs. S. M. Davenport, for board .	10.00
		Grafton county, for board . .	66.00
		Carroll county, for board . .	34.93
	10.	Goffstown, for board . . .	18.43
	12.	Concord, for board . . .	8.14
		Dover, for board	3.00
	14.	Colebrook, for board . . .	39.00
	19.	Rockingham county, for board .	189.42
	21.	Cheshire county, for board . .	52.28
		Fitzwilliam, for board . . .	19.50
	23.	Hillsborough county, for board .	229.50
		J. H. Blonquist, for hay . .	9.00
		Coös county, for board . . .	19.50
	26.	Pittsfield, for board . . .	39.00
	27.	Nashua, for board	$328.71
		James Weston, for drawing manure	15.50
	30.	N. O. Garland, for rent . . .	21.00
	31.	Strafford county, for board and J. Gagner's burial expenses . .	95.00
Aug.	4.	Mrs. S. M. Davenport, for board .	10.00
	9.	B. C. Hill, for rent and milk . .	10.00
		J. H. Whitfield, for hay . . .	68.50
Sept.	1.	F. H. Morse, for hay . . .	5.32
	6.	interest from Wilkins fund . .	70.00
	8.	Croydon, for board . . .	39.00
	29.	B. C. Hill, for rent and milk . .	9.75
	30.	Carl E. York, for peas, beef, and hay	44.83
		I. C. Merrill, for provisions . .	3.80
		E. M. Slayton, for hay . . .	20.96
		J. C. Ray, for labor of men and oxen	36.00
		Manchester Stocking Co., for labor	987.30

DETAILED ACCOUNT OF CASH PAID.

F. E. DODGE.

1889.			
April 1.	For one pair rubber boots		$2.00

POST-OFFICE.

	For box rent from April 1, 1889, to April 1, 1890 . .	$6.50	
	two keys	1.00	
			$7.50

FIRST CONGREGATIONAL SOCIETY.

	For rent of three seats from April 1, 1889, to April 1, 1890		$33.60

L. D. COLBY.

April 1.	For one load gravel		$0.50

J. H. BROWN.

April 6.	For 14 days' painting		$21.00

C. H. MARTIN & CO.

April 1.	For 1 qt. ammonia, 30c; 1 qt. glycerine, 87c . . .	$1.17	
	1 lb. chlo. potassa, 30c; 400 pills, 85c	1.15	
June 6.	6 qts. paint, $2.33; 1 can cherry stain, 15c . .	2.48	
Dec. 18.	2 qts. ammonia, 40c; 1 qt. syrup senna, 70c . .	1.10	
	1 qt. sarsaparilla, $1.60; 2 bottles cough syrup, $1.50	3.10	
	1 pt. tr. lobelia, 40c; 1 bottle toothache drops . .	1.15	
1890.			
Mar. 14.	800 lbs. Phœnix lead . .	58.00	
			$68.15

REINSTEIN BROTHERS.

1889.			
April 11.	For 2 boxes buckles, 70c ; 1 great gross pant-buttons, $1.23		$1.93

A. M. SMITH.

April 17.	For 4,116 lbs. meadow hay		$14.40

WILLIAM W. HUBBARD.

Sept. 24.	For 1 door frame, $5 ; 1 door, $2.50 . .		$7.50

G. W. SEAVEY.

April 25.	For repairing organ, $4.50 ; tuning piano, $2		$6.50

AMERICAN EXPRESS CO.

	For bundles, boxes, etc., from January 1, 1889, to December 25, 1889 . . .		$7.90

MERRILL & LAIRD.

April 12.	For whitewashing, cementing, and mason repairs . . .	$61.87	
May 26.	mason repairs on boiler .	3.12	
Oct. 16.	repairing plastering . .	4.75	
			$69.74

DANIEL W. BILL.

May 2.	For expenses attending 2 trustee meetings	$14.00	
Nov. 2.	1 barrel boiled cider . .	25.50	
			$39.50

J. W. PEPPARD.

May 2.	For traveling expenses as trustee, one year .		$9.24

THE TELEGRAPH PUBLISHING CO.

April 29.	For advertising annual examination	$1.50	
	"Nashua Weekly Telegraph" from September, 1889, to September, 1890 . .	1.00	
			$2.50

HARTFORD STEAM-BOILER INSPECTION AND INSURANCE CO.

May 14.	For insuring boiler one year . . .		$30.00

F. L. BURNHAM.

May 22.	For 10 bu. apples . . .	$5.50	
1890.			
Feb. 25.	6 bbls. apples . . .	11.00	
			$16.50

G. H. BIXBY.

1889.			
May 24.	For one Durham bull, four years old . .		$49.00

JOSEPH PUTNAM.

May 27.	For 2¼ cords manure		$9.00

PORTER BROTHERS & CO.

April 12.	For 1 great gross eyelet holdfast buttons	$3.00	
Nov. 29.	2½ great gross buttons and eyelets, $12.25 ; express, 25c	12.50	
			$15.50

GEORGE J. RAYMOND CO.

May 29.	For 25 hats		$10.30

CLARENCE S. BURR.

May 29.	For 1 stage whip-stock		$1.50

THOMAS KELLEY.

May 30.	For 1 bu. peanuts		$2.40

C. B. DICKEY.

April 22.	For 10,844 lbs. meadow hay .	$46.25	
June 3.	2,100 lbs. meadow hay .	9.03	
			$55.28

FLEISCHMANN & CO.

	For 118 lbs. compressed yeast, from January 28, 1889, to April 1, 1890 . . .		$41.30

BURNS & POORE.

Oct.	9.	For 3,175 lbs. egg coal	$11.12

A. G. WHITCOMB.

April	11.	For 12 school chairs	$14.40

BLACKSTONE & FISHER.

Oct.	9.	For extracting teeth for inmates 18 months .	$20.50

MANCHESTER BEEF CO.

April	23.	For 247 lbs. beef	$14.82

HENRY MERRILL & CO.

May	25.	For painting and paints	$25.19

S. P. PIKE & CO.

Mar.	1.	For 80 lbs. butter, $14.60; 11 doz. eggs, $1; 3 qts. oysters, 90c	$16.50
	18.	60 lbs. butter, $10.80; 25 lbs. jam, $2; 1 bu. salt, 40c .	13.20
April	10.	4 lbs. halibut, 56c; 30 doz. eggs, $3.75; 4 lbs. crackers, 20c	4.51
May	27.	55 lbs. butter, $8.25; 6 lbs. steak, 75c . . .	9.00
June	7.	119½ lbs. butter, $19.80; 8¼ lbs. steak, 86c . .	20.66
July	2.	56 lbs. butter, $8.40; 118 lbs. lamb, $15.81; 80 lbs. ham, $9.20 . . .	33.41
	16.	41 lbs. corn beef, $2.05; 22 lbs. steak, $3.28; cucumbers, 35c . . .	5.68
	24.	107 lbs. butter, $16.05; 6½ lbs. steak, 78c . . .	16.83
Aug.	6.	38 lbs. cheese, $3.80; 96 lbs. butter, $14.40; 10 lbs. fish, 60c	18.80

Aug. 31.	For 2 melons, 40c: 6½ lbs. steak, $1.17; 66 lbs. butter, $9.29 . . .	$10.86	
Sept. 27.	6 lbs. lamb, 96c; 27 lbs. butter, $4.05 . . .	5.01	
Oct. 16.	60 lbs. butter, $9.60; 1 box grapes, 50c . . .	10.10	
1890.			
Jan. 28.	150 lbs. butter, $18.96; eggs, $1	19.96	
		$184.52	
	Credit, 1 bbl. beets	2.00	
			$182.52

THE UNION PUBLISHING CO.

1889.			
April 29.	For advertising examination .	$7.50	
	"Daily Union" from May 1, 1889, to April 1, 1890 .	5.50	
Oct. 29.	advertising	7.50	
			$20.50

MANCHESTER FISH MARKET.

Mar. 22.	For 18 lbs. halibut, $2.70; 40 lbs. cod, $2	$4.70	
April 19.	12 lbs. halibut, $1.80; 40 lbs. cod, $2; 12 lbs. mackerel, $1.20 . . .	5.00	
May 3.	40 lbs. cod, $2; 9 lbs. halibut, $1.26; 4 lbs. shad, 80c	4.06	
10.	40 lbs. haddock, $2.50; 6 lbs. halibut, 84c; 4 lbs. shad, 80c . . .	4.14	
17.	40 lbs. cod, $2; 6 lbs. halibut, 72c	2.72	
30.	4 lbs. shad, 60c; 6 lbs. mackerel, $1.20; 50 lbs. cod, $2.50	4.30	

June	14.	For 11½ lbs. salmon, $2.48; 50 lbs. haddock, $2.50; 12 lbs. mackerel, $1.20 . .	$6.18	
	28.	10 lbs. mackerel, $1.50; 15 lbs. halibut, $1.80 . .	3.30	
Aug.	19.	14 lbs. bluefish, $2.20; 105 lbs. haddock, $5.25 . .	7.45	
				$41.85

E. FRYE.

Mar.	28.	For blacksmith repairs on sleigh and wagon . . .	$9.45	
April	19.	repairs on pole of buggy and shafts	1.10	
May	30.	repairs on market wagons, carts, buggy, and shovel .	14.75	
Aug.	11.	repairing wagons from June 4 to September 30 . .	25.60	
				$50.90

C. O'SHAUGHNESSEY & SON.

Mar.	22.	For filing saws, $1; putting in pole, bedpiece, $4; shaft, $2	$7.00	
May	31.	1 rocker, $2; 5 spokes, $1.50; repairs on wheels, shaft, $3	6.50	
June	4.	1 bedpiece, $2; crossbar, $1; whiffletree, $1; repairing seat, $3.25 . . .	7.25	
	28.	repairs on wheels, hay-rack, and painting . . .	2.25	
Dec.	5.	repairing carts and wagons, $10.10; filing saws, 75c .	10.85	
				$33.85

B. F. WITHAM.

May	31.	For 300 lbs. cod . . .	$14.00	
1890.				
Feb.	7.	200 lbs. cod . . .	8.91	
				$22.91

W. GOODWIN & CO.

1889.				
June	10.	For painting buggy		$0.50

T. W. RICHARDS.

June	21.	For 180 lbs. beef . . .	$6.30	
Oct.	22.	1 pr. steers	85.00	
				$91.30

R. D. GAY.

June	20.	For 5¾ yds. bunting		$1.43

JAMES ELLEMAN.

June	25.	For 23 bottles insect poison . . .		$9.25

GEORGE W. CHAPMAN.

		For shoeing horses from March 9, 1889, to April 1, 1890		$98.71

TEMPLE & FARRINGTON.

April	6.	For 26 rolls paper, $3.46; 33¾ yds. border, $3.83 . .	$7.79	
	12.	36 books for Smyth prizes, $20.50; 5 vols. for library	39.20	
June	8.	1 cash book, $2; 1 choice selections, 25c . . .	2.25	
Aug.	6.	150 bill heads, $1.50; ½ M. envelopes, $1 . . .	2.50	
Oct.	14.	cash book, $1.40; 3 library books, 85c . . .	2.25	
Nov.	2.	4 packages paper-wrappers, 40c; 1 gross pens, $1.50 .	1.90	
1890.				
Jan.	7.	1 N. H. Register, 20c; 2 qts. ink, $1.37; 18 slates, $1.26	2.83	
Mar.	31.	2 reams letter paper, $7.30; 2 books, $1.63 . .	8.93	
				$67.65

CHARLES F. SPRAGUE.

1889.				
June	6.	For 78 yds. cotton . . .	$5.85	
Sept.	28.	17 yds. flannel, $2.63; 36 yds. silesia, $2.88 . .	5.51	
				$11.36

F. W. GOULD.

June	26.	For arresting Albert Fletcher . . .		$20 00

CAVANAUGH BROS.

Mar.	29.	For sponge, 40c; whip, 50c; 1 gal. harness dressing, $1 .	$1.90	
May	6.	plush robe, $8; halter, $1.25; repairing harness, $1.50 .	10.75	
June	7.	repairing collar . . .	.50	
1890.				
Feb.	1.	1 chestnut horse . . .	196.00	
				$209.15

CARL E. YORK.

1889.				
April	6.	For 3 qts. oysters, $1.05; 3 lbs. crackers, 33c; 20½ lbs. butter, $4.10 . . .	$5.48	
	26.	17 lbs. fowl, $2.72; 30 lbs. haddock, $1.80 . .	4.52	
May	1.	16½ lbs. veal, $2.31; 14½ lbs. butter, $2.90; 6 lbs. cream tartar, $2 . .	7.21	
	18.	12 lbs. crackers, 84c; 3½ lbs. lobster, 35c; 22½ lbs. fowl, $4.95 . . .	6.14	
	21.	10 lbs. veal, $1.50; 12 bananas, 30c; 15 lbs. lamb, $3.75	5.55	
June	5.	15 lbs. veal, $3; 6 boxes strawberries, 75c; pineapples, 50c . . .	4.25	

June	11.	For 13 lbs. halibut, $1.56; 12¼ lbs. salmon, $3.68; 6 doz. eggs, $1.14 . . .	$6.38
	24.	258 lbs. sugar, $25.16; box lemons, $4.75; 10¼ lbs. steak, $1.74 . . .	31.65
	29.	6 lbs. steak, $1.20; 1 water-melon, 30c . . .	1.50
July	4.	2 pineapples, 36c; 12 boxes berries, $1.20 . . .	1.56
	11.	3 bu. peas, $2.40; 2 doz. cucumbers, 70c; 17¾ lbs. salmon, $4.97 . . .	8.07
	22.	11 lbs. steak, $2.50; 3 melons, 85c; 52 gals. vinegar, $8.32	11.67
Aug.	2.	12 lbs. crackers, 78c; 3 melons, 95c; 4 doz. eggs, 88c	2.61
	24.	258 lbs. sugar, $24.51; bag salt, 90c; 2 melons, 50c .	25.91
Sept.	14.	25 lbs. sweet potatoes, 75c; 10 lbs. crackers, 70c .	1.45
	27.	1 bbl. sweet potatoes, $3.50; 243 lbs. sugar, $21.87 .	25.37
Oct.	12.	14½ lbs. chicken, $2.85; 3 qts. oysters, $1.35; 3 lbs. crackers, 30c . . .	4.50
	16.	20 lbs. lard, $2.40; 14 lbs. coffee, $4.76; chestnuts, 38c; 1 lb. candy, 40c .	7.94
	31.	1 lb. nutmeg, 75c; 2 doz. eggs, 56c; 2 brushes, 60c; 6 boxes blacking, 50c .	2.41
Nov.	2.	12½ lbs. chicken, $2.13; sweet potatoes, 25c; basket grapes, 30c . .	2.68
	6.	2 qts. oysters, 70c; 4 lbs. crackers, 40c; 8⅝ lbs. chicken, $1.58 . .	2.68

Nov.	11.	For 15 lbs. fowl, $2.40; 2 qts. oysters, 80c; 4½ lbs. crackers, 45c; jar, 12c .	$3.77
	15.	320 lbs. sugar, $24.40; 12 lbs. cassia, $2.20; 6 lbs. cream tartar, $2.10 . .	28.70
		10 lbs. soda, 60c; 2 lbs. tea, $1.30; 20 lbs. lard, $1.40; 1 can, 12c . . .	3.42
	16.	1 bag salt, 90c; 2 qts. oysters, 70c; 2 lbs. crackers, 20c; 10¼ lbs. fowl, $1.85	3.65
	27.	32¾ lbs. turkey, $5.89; 30 lbs. raisins, $3.72 . .	9.61
		14½ lbs. chicken, $2.75; 20 lbs. nuts, $2.40; 6 oranges, 10c	5.25
Dec.	7.	12⅜ lbs. fowl, $1.98; 2½ bu. salt, $1.25; 7¼ lbs. turkey, $1.60 . . .	4.83
	21.	9¾ lbs. fowl, $1.46; 3 lbs. grapes, 90c; 2 qts. oysters, 70c	3.06
	24.	139 lbs. turkey, $27.62; 50 lbs. candy, $5.50; 50 lbs. nuts, $5; box oranges, $3.25	41.37
	27.	20 lbs. cracked wheat, $1; 10 lbs. sausage, $1; 5½ lbs. dates, 55c . . .	2.55
	28.	4¾ lbs. steak, 95c; 9½ lbs. chicken, $1.90 . .	2.85
	31.	6⅞ lbs. steak, 98c; 13 lbs. crackers, 78c . . .	1.76
1890.			
Feb.	22.	11 lbs. fowl, $1.76; 12 oranges, 35c; 12 lemons, 20c; 12 lbs. fowl, $2.40 .	4.71

Mar.	15.	For 3 qts. oysters, $1.05; 3 lbs. crackers, 30c; 12 oranges, 35c	$1.70	
				$286.76

JOHN E. TOWLE & CO.

1889.				
April	29.	For 176 lbs. ham, $19.36; 1 basket, $1	$20.36	
May	23.	35 lbs. ham	3.85	
				$24.21

S. C. FORSAITH MACHINE CO.

June	12	For 2 hand hole yokes, 32c; 6 lbs. rubber packing, $1.50	$1.82	
1890.				
Jan.	22.	2 cap-screws, 12c; 15 fire-brick, $1.20 . . .	1.32	
				$3.14

E. M. SLAYTON.

1889.				
April	1.	For 2 cases eggs, $13.72; 10 gals. syrup, $6.50; 110 lbs. butter, $16.50 . . .	$36.72	
	20.	2 cases eggs, $8.73; 50 lbs. lard, $3.75 . . .	12.48	
May	1.	63 lbs. cheese, $8.19; 1 case eggs, $3.90 . . .	12.09	
	15.	115 lbs. butter, $17.25; bbl. pork, $15.50; 30 doz. eggs, $4.35 . . .	37.10	
June	3.	1 bag beans, $4.18; 123½ lbs. butter, $17.29 . .	21.47	
	24.	2 bags beans, $11.50; 2 cases eggs, $10.50 . . .	22.00	
July	9.	3 cases ev. apples, $9.75; case eggs, $8.82; 50 lbs. lard, $3.50 . . .	22.07	
	11.	52 lbs. cheese, $5.20; 31 lbs. butter, $6.51; 1 bbl. pork, $15.50	27.21	

Aug.	31.	For 5 bags beans, $33.94; 1 bbl. pork, $13.50; 32 lbs. lard, $2.24	$49.68	
Sept.	21.	114 lbs. butter, $17.10; 5 bags beans, $35.35 . .	52.45	
Oct.	1.	52 lbs. cheese, $6.24; 64 lbs. butter, $9.60; 1 bbl. pork, $13.50	29.34	
	30.	111 lbs. butter, $17.76; ¼ case evaporated apples, $1.40	19.16	
Nov.	26.	90 lbs. chicken, $11.25; 143 lbs. turkey, $31.46; 1 bag beans, $7.28 . . .	49.99	
Dec.	30.	53 lbs. cheese, $6.36; 4 bbls. beans, $42.92 . . .	49.28	
1890.				
Feb.	12.	140 lbs. butter, $21; 1 case eggs, $4.50; 10 bags beans, $48.22	73.72	
Mar.	18.	24 lbs. honey, $4.32; 1 case eggs, $4.65; ½ bbl. lard, $8.05	17.02	
			$531.78	
		Credit, hay	49.30	
				$482.48

BARTON & CO.

1889.				
April	15.	For 16¾ yds. carpet . . .	$12.57	
June	26.	159 yds. white check . .	11.15	
July	20.	28¾ yds. cambric, $2.44; 24¾ yds. serge, $2.48; 47 yds. silesia, $3.53 . .	8.45	
Aug.	22.	14 yds. dress goods, $1.12; 4 doz. buttons, 40c . .	1.52	
Sept.	28.	77½ yds. flannel, $8.31; 53¾ yds. silesia, $4.03; 57¾ yds. ticking, $8.09 .	20.43	

Sept.	28.	For 3 prs. blankets, $10.25; 38½ yds. canvas, $4.81; 90 yds. chevoit, $5.63 . . .	$20.69	
Oct.	2.	398 yds. cotton, $28.95; 64¼ yds. flannel, $7.39; 2 yds. silesia, 34c . .	36.68	
Nov.	15.	48 yds. cambric, $2.40; 11 boxes ruching, 88c . .	3.28	
Dec.	23.	4 yds. tarlatan, 50c; 5 prs. blankets, $7.50 . .	8.00	
1890.				
Jan.	7.	547½ yds. shirting, $43.50; 186 yds. cotton, $12.02 .	55.52	
Mar.	11.	5 jackets, $19.90; 24 yds. enamel cloth, $5.50; 1 yd. carpet, 87c . . .	26.27	
				$204.56

C. T. ALLEN.

1889.				
April	13.	For 3 qts. oysters, $1.05; 3 lbs. crackers, 30c; 4¼ lbs. veal, 77c . . .	$2.12	
	25.	7¾ lbs. steak, $1.61; 6¾ lbs. lobster, 87c; 12 lbs. halibut, $2.40 . . .	4.88	
May	1.	12½ lbs. fowl, $2.83; 6 gals. oysters, $6.60; 20 lbs. crackers, $1.80 . .	11.23	
	4.	6 lbs. halibut, 96c; 6¼ lbs. lobster, 75c . . .	1.71	
	11.	17¾ lbs. fowl, $3.90; 2 doz. eggs, 36c; 7½ lbs. lobster, 75c	5.01	
	24.	9 lbs. veal, $1.53; 9¾ lbs. halibut, $1.17; 45 lbs. haddock, $1.80 . .	4.50	
	25.	10¾ lbs. fowl, $2.37; 5¾ lbs. lobster, 58c . .	2.95	

June	5.	For 11½ lbs. steak, $2.19; 12 bananas, 35c . . .	$2.54
	7.	30 lbs. haddock, $1.20; 5 lbs. shad, $1; 2⅞ lbs. steak, 72c . . .	2.92
	13.	10 lbs. mutton, $1.50; 18½ lbs. steak, $3.75 . .	5.25
	19.	7 lbs. steak, $1.40; 6¼ lbs. lobster, 75c . . .	2.15
	29.	12½ lbs. salmon, $3.75; 6⅛ lbs. steak, 92c; 7 lbs. lobster, 77c	5.44
July	1.	5½ lbs. steak, 83c; 11 lbs. lamb, $2.20; 10 lbs. salmon, $3.30 . . .	6.33
	30.	8½ lbs. salmon, $3.40; 6¼ lbs. steak, $1.06; 13 lbs. bluefish, $1.95 . .	6.41
Aug.	9.	35 lbs. cod, $1.75; 13½ lbs. bluefish, $2.30; sweet potatoes, 75c . . .	4.80
	16.	10 lbs. halibut, $1.60; 12½ lbs. haddock, 63c; 18 lbs. sweet potatoes, 90c . .	3.13
	17.	bluefish, 90c; 4 doz. eggs, 80c; 12 lbs. sweet potatoes, 60c . . .	2.30
	28.	16½ lbs. steak, $2.58; 14¾ lbs. fowl, $2.66; 30 lbs. sweet potatoes, $1.28 .	6.52
Sept.	7.	17 lbs. sweet potatoes, 68c; 3 qts. oysters, $1.05; 3 lbs. crackers, 30c . . .	2.03
	21.	pout, $1.35; 6¾ lbs. steak, $1.02; 1 qt. oysters, 35c; 1½ lbs. crackers, 15c .	2.87
	28.	3 qts. oysters, $1.20; 3 lbs. crackers, 30c . . .	1.50

Oct.	9.	For 3 qts. oysters, $1.13; 3½ lbs. crackers, 35c; 11¼ lbs. chicken, $2.40 . .	$3.96	
	19.	14 lbs. beef, $2.80; 3 qts. oysters, $1.05; 3 lbs. crackers, 30c; Bologna, 8c	4.23	
	26.	15¼ lbs. fowl, $3.02; 3 qts. oysters, $1.05; 3 lbs. crackers, 30c; 3¼ lbs. lobster, 45c . . .	4.82	
	31.	15 lbs. sweet potatoes, 50c; 6 qts. oysters, $2.10; 7 lbs. crackers, 70c . . .	3.30	
Dec.	13.	5 qts. oysters, $1.75; 5 lbs. crackers, 50c; 11½ lbs. fowl, $1.84 . . .	4.09	
	20.	20 lbs. haddock, $1; 1 gal. oysters, $1.40; 4 lbs. crackers, 40c . . .	2.80	
1890.				
Jan.	4.	3 qts. oysters, $1.05; 3 lbs. crackers, 30c; 10½ lbs. halibut, $2.31 . . .	3.66	
Feb.	24.	8½ lbs. steak, $1.28; 4 qts. oysters, $1.40; 5½ lbs. crackers, 55c . . .	3.23	
Mar.	4.	2¼ lbs. pigs' feet, 23c; 3 qts. oysters, $1.05 . . .	1.28	
	22.	3 qts. oysters, $1.05; 3 lbs. crackers, 30c; 6 oranges, 20c	1.55	
	26.	3 qts. oysters, $1.05; 3¼ lbs. crackers . . .	1.37	
				$120.88

KILLEY & WADLEIGH.

1889.				
April	2.	For 2 lbs. Indian red, 32c; 2 axes, $1.50; 2 handles, 40c	$2.22	

April	24.	For 52 carriage bolts, $1.10; 18 lbs. nails, 63c; 3 lts. glass, 24c	$1.97	
	30.	1 box glass, $2.58; glass-points, 10c; 1 pr. hinges, 20c	2.88	
May	6.	1 cask nails, $2.25; 50 lbs. white lead, $3.38 . .	5.63	
June	28.	3 gals. sperm oil, $3; 2 clothes baskets, $1.80 .	4.80	
July	11.	1 ice cream freezer, $2; wrench, 25c; 2½ doz. bolts, 63c . . .	2.88	
Aug.	21.	3 gals. lard oil, $2.40; ½ doz. horse cards, 50c; 2 brushes, 95c . . .	3.85	
Sept.	13.	10 scrub brushes, $1.67; 2 axes, $2; dog collar and lock, 70c . . .	4.37	
Oct.	3.	10 lbs. nails, 30c; 2 casks nails, $4.65; hammer, 25c	5.20	
	24.	½ bu. timothy, 50c; 1 box glass, $2.50; 4 lbs. putty, 16c	3.16	
Nov.	13.	2 locks, $5; keys, 30c; 1½ oz. sponge, 30c . .	5.60	
		1 padlock, 25c; 1 hasp, 12c; 6 lts. glass, 24c . .	.61	
Dec.	12.	6 bolts, 12c; door spring, 25c; 200 base-ball caps, 50c	.87	
	25.	1 doz. sleds, $8.50; 3 gals. sperm oil, $3; box axle grease, 40c . . .	11.90	
1890.				
Jan.	4.	1 basket, 62c; 1 pt. paint, 24c; sash-tool, 12c; gal. oil, $1.25 . . .	2.23	
Feb.	4.	1 lock, 25c; box plant food, 25c; 1 doz. mops, $1.25 .	1.75	
				$59.92

PARTRIDGE BROS.

1889.		
April 25.	For 26 bags meal, $24.70; 12 bags corn, $11.40; 20 bags oats, $19; 700 lbs. bran, $7	$62.10
	2 bags cottonseed meal, $2.80; 2 casks plaster, $3.34	6.14
May 31.	20 bags meal, $19; 35 bags oats, $32; 1,400 lbs. shorts, $14; 15 bags corn, $14.25	79.25
June 24.	10 bags corn, $9.50; 10 bags oats, $9; 1,950 lbs. bran, $17.55; 2 bags meal, $1.90	37.95
July 16.	7 bags corn, $6.75; 2 bags meal, $1.90; 7 bags oats, $6.55; 2,400 lbs. bran, $21.60	36.80
Aug. 31.	21 bags oats, $18.90; 20 bags corn, $20.75; 15 bags meal, $15.50; 2,450 lbs. bran, $23.11 . . .	78.26
Sept. 18.	13 bags meal, $13; 3 bags oats, $2.55; 2 bags corn, $2; 1,400 lbs. bran, $12.60	30.15
Oct. 31.	35 bags meal, $33.75; 10 bags corn, $9.50; 8 bags oats, $6.80; 1,850 lbs. bran, $16.65	66.70
Nov. 29.	28 bags meal, $27.60; 10 bags corn, $9.75; 11 bags oats, $9.05; 1,265 lbs. bran, $11.39 . . .	57.79
Dec. 30.	36 bags meal, $35.20; 14 bags corn, $13.70; 17 bags oats, $13.60 . . .	62.50
	2,725 lbs. bran, $24.48; 47 lbs. cement, 35c . .	24.83

1890.				
Jan.	24.	For 45 bags meal, $42.75; 1,989 lbs. bran, $27.54; 10 bags corn, $9.50; 10 bags oats, $8	$87.79	
Feb.	27.	48 bags meal, $47.80; 3,610 lbs. shorts, 32.40; 11 bags corn, $9.90; 29 bags oats, $23.20	113.39	
Mar.	29.	2 bags oats	1.60	
				$745.25

ALLEN N. CLAPP.

For 13 bbls. kerosene, from May 3, 1889, to March 4, 1890	$73.12

NEW ENGLAND TELEPHONE AND TELEGRAPH CO.

For telephone rental and service from March 1, 1889, to March 31, 1890 . . .	$80.66

J. H. WIGGIN & CO.

1889.			
April	4.	For 2 bbls. sugar, $45.17; 1 box soap, $3.75; 46 lbs. crackers, $2.76 . . .	$51.68
May	14.	25 lbs. coffee, $4; 330 lbs. y. c. sugar, $24.75 . .	28.75
	18.	322 lbs. gr. sugar, $27.98; 2 bags salt, $1.70; 6 lbs. cr. tartar, $2.10 . . .	33.58
June	3.	43 lbs. starch, $2.15; 20 lbs. coffee, $6.60 . . .	8.75
	15.	149 gals. molasses, $59.60; 2 bags salt, $1.60 . .	61.20
	29.	5 lbs. coffee, $1.75; 261 lbs. sugar, $24.80 . . .	26.55
July	1.	10 lbs. coffee, $2.20; 8 bbls. flour, $53.20; 1 box soap, $3.75	59.15

July	4.	For 2 bbls. sugar, $61.18; 100 lbs. codfish, $6; 50 lbs. crackers, $3 . . .	$70.18
	8.	40 lbs. starch, $2.80; insect powder, $4; 6 lbs. cr. tartar, $2.10 . . .	8.90
Aug.	3.	2 bags salt, $1.70; 30 lbs. rice, $2.40; matches, 72c	4.82
	21.	50 lbs. coffee, $6; 1 bag salt, 80c; 10 lbs. soda, 50c .	7.30
Sept.	9.	2 bbls. sugar, $58.88; 6 bbls. flour, $39.90; 46 lbs. crackers, $2.79 . .	101.57
	14.	100 lbs. codfish, $6; 12 lbs. rolled oats, $1.44 . .	7.44
	25.	6 lbs. cr. tartar, $2.10; 20 lbs. tea, $7; 2 bags salt, $1.70	10.80
Oct.	4.	10 lbs. coffee, $1.45; 2 bags salt, $1.60; 24 cakes yeast, 48c	3.53
Dec.	4.	45 lbs. lard, $3.72; ¼ gross matches, 12c; 3 bags salt, $2.40	6.24
	31.	2 bbls. flour, $12; 332 lbs. sugar, $23.65; 20 lbs. coffde, $7	42.65
1890.			
Jan.	4.	3 bbls. flour, $16.95; 315 lbs. gr. sugar, $22.05; 328 lbs. y. c. sugar, $19.68 .	58.68
	6.	50 lbs. coffee, $6.25; 10 lbs. sulphur, 60c; 40 lbs. crackers, $2.40 . .	9.25
	8.	17¾ lbs. chicken, $3.90; 20 lbs. coffee, $7; 2 bbls. flour, $11.30 . . .	22.20

Feb.	5.	For 1 doz. mustard, $2.20; bag salt, 80c; 40 lbs. cod, $3.20; matches, 12c .	$6.32	
	11.	6 bbls. flour, $32.40; 23 lbs. crackers, $1.38; 6 lbs. cr. tartar, $2 . . .	35.78	
	13.	2 bbls. sugar, $44.40; 62 lbs. cheese, $7.44; bag salt, $1	52.84	
	24.	52 bbls. flour, $280.80; 44 lbs. crackers, $2.42; matches, 12c; yeast, 24c .	283.58	
Mar.	22.	2 bbls. sugar, $43.58; 3 bags salt, $2.40; 20 lbs. coffee, $7.20	53.18	
				$1,054.92

PIKE & HEALD.

1889.				
June	29.	For labor and stock repairing boiler, $16.19; repairing coffee-urn, $1.50 . .	$17.69	
Sept.	30.	1 steam pump, $168.75; water-piping, $204.93 . .	373.68	
Oct.	12.	2 pails, $1; 1 set brick, $1.25; grate, $1.72; packing, $1.80	5.77	
Dec.	31.	labor and stock repairing boiler	20.87	
1890.				
Jan.	20.	1 speaking-tube, $3.42; 1 globe valve, $4 . .	7.42	
Feb.	3.	labor and stock repairing steam-pump and water-closet	9.33	
				$434.76

J. S. HOLT & CO.

For 834 gals. soft soap, $52.09; 6 boxes hard soap, $24.18, from April 1 to September 11, 1889	$76.27	
Credit, bones, grease, and tallow . .	4.56	
		$71.71

MANCHESTER HARDWARE CO.

1889.			
April	2.	For 2 lbs. paint, 55c ; ½ lb. lamp-black, 6c ; 20 lbs. cal. plaster, 30c . . .	$0.91
	15.	6 hoes, $1.50 ; $2\frac{13}{15}$ bu. grass seed, $5.66 ; 30 lbs. clover seed, $3.15 . . .	10.31
	17.	50 lbs. white lead, $3.25 ; 1 lb. paint, 12c ; 39 bolts, $1.06	4.43
	19.	½ gal. paint, 60c ; asphaltum, 10c ; buck saw, 65c ; 2 bits, 20c . . .	1.55
	23.	1 can paint, 34c ; 14 lbs. zinc, 91c ; 2 lts. glass, 22c .	1.47
May	1.	2 lbs. emery powder, 20c ; 2 files, 29c ; weed cutter, $1	1.49
	8.	12 brooms, $1.75 ; pr. scissors, 65c ; staples and hooks, 20c	2.60
	18.	438 lbs. soda ash, $9.86 ; parsnip seed, 10c ; 59 ft. netting, 44c . . .	10.40
	30.	2 rifles, 20c ; paper tacks, 5c ; 10 lbs. Paris green, $2.20	2.45
June	5.	½ gal. oil finish, $1 ; can, 10c ; varnish brush, 50c .	1.60
		29 bolts, 29c ; 4 qts. beans, 68c ; 6 scythes, $2.50 .	3.47
	10.	sponge, 18c ; chamois, 55c ; whip-lash, 25c . .	.98
	11.	8 lts. glass, 40c ; 4 qts. peas, 25c ; 4 yds. chain, 16c .	.81
	25.	4 window screens . .	1.50
July	10.	6 bolts, 20c ; 1 ice cream freezer, $2 ; set flat-irons, $1.75	3.95

July	29.	For 1 wringer, $3.50; 6 brooms, $1.65; 4 rolls for wringer, $4	$9.15
Aug.	21.	1 set casters, 50c; screw-driver, 20c; 2 brooms, $1; 1 lb. staples, 5c . .	1.75
	23.	2 halter chains, 50c; Acme harrow bolts and tooth, 75c	1.25
	24.	$2\frac{29}{45}$ bu. grass seed, $5.49; 1 set ox balls, 25c . .	5.74
Sept.	5.	1 pr. ox bows and pins, $1; 10 fish lines, 40c; 18 hooks, 10c . . .	1.50
	18.	3 lts. glass, 18c; 3 whip sticks, 75c; 2 lashes, 20c . .	1.13
	24.	2 draft chains, $3.25; 1 pr. ox-bows, 90c; 2 pr. bow pins, 40c . . .	4.55
Oct.	7.	4 hooks and staples, 20c; 4 bolts, 20c; trowel, 75c; 1 lb. staples, 5c . . .	1.20
	14.	1 gross screws, 30c; gal. turpentine, 60c; pr. hinges, 10c	1.00
	16.	19 lts. glass, $1.32; 4 sets blind hinges and fastenings, $1.32 . . .	2.64
		1 gross screws, 21c; putty knife, 15c; whistle, 20c .	.56
Nov.	2.	½ bu. grass seed, $1; can hoof ointment, $1; 2 lashes, 16c . . .	2.16
	11.	1 pr. bow pins, 25c; putty knife, 30c; 12 bolts, 42c	.97
Dec.	16.	1 duster, $1.50; putty, 28c; 10 lts. glass, 56c; razor, 55c	2.89

Dec.	20.	For 53 lbs. nails, $2.12; keg nails, $4; rep. key and wrench, 50c . . .	$6.62	
		12 lag screws . . .	.18	
1890.				
Jan.	1.	7 lts. glass, $1.09; 1 gross screws, 55c; 3¾ lbs. stake irons, 8c . . .	1.72	
	16.	8 bolts, 12c; 1⅞ lbs. copper wire, 56c; 3 ice picks, $2.10	2.78	
Feb.	6.	2 brooms, $1; lock, 35c; 2 hammers, 60c; 1 qt. oiler, 42c	2.37	
	11.	1 box glass, $3.07; keg nails, $3.75; sponge, 30c; 8 currycombs, $1.18 . .	8.30	
	18.	1 keg nails, $2.25; chamois, 60c; gross screws, 28c; 1 bit, 8c	3.21	
	21.	1 pr. hinges, 10c; 1 plate button and knob, 5c; 4 lts. glass, 44c . . .	.59	
Mar.	26.	2 pr. butts, 16c; 25 lbs. putty, 63c; lock, 15c; 2 gals. turpentine, $1.20 .	2.14	
	31.	10 lbs. elastic cement, 70c; 3 clothes baskets, $2.35 .	3.05	
				$115.37

DRAKE & DODGE.

1889.				
June	8.	For 20 bbls. Pillsbury flour .	$124.00	
Aug.	8.	14 bbls. Pillsbury flour .	91.00	
Dec.	27.	14 bbls. flour, $79.80; 1 case rolled wheat, $3.25 . .	83.05	
				$298.05

LEWIS K. MEAD.

April	10.	For cough syrup, 75c; 1 bottle sarsaparilla, 85c; 1 "Herald," 5c	$1.65	

May	22.	For 1 bottle sarsaparilla, 85c; 1 bottle Fellows' syrup, $1.25	$2.10	
Sept.	11.	1 prescription, 55c; lime water, 5c; paper, 5c .	.65	
Oct.	21.	1 prescription, 30c; sweet spirits niter, 25c . .	.55	
1890.				
Jan.	20.	niter, 25c; magnesia, 25c; 1 prescription, 65c . .	1.15	
				$6.10

CHARLES A. HOITT & CO.

1889.				
April	26.	For 8 doz. mugs, $8; 24 doz. plates, $16.70; 8 casters .	$32.70	
		6 doz. knives and forks, $8.40; 5 doz. cups, $5.40; dish-pan, 37c . . .	14.17	
		1 doz. goblets, $1; 15 pitchers, $4.26; 2 covered dishes, $1 . . .	6.26	
	30.	2 ewers and basins, $1.84; 2 milk pails, 66c; 8 tablespoons, $2 . . .	4.50	
May	13.	3 nappies, 83c; 2 bedsteads, $7.75; 1 pr. pillows, $5 .	13.58	
	28.	2 mattresses . . .	2.00	
July	22.	12 doz. wicks, 60c; bowl, 50c; 3 peppers, 30c; 12 chimneys, 60c . . .	2.00	
Aug.	7.	4 vinegar bottles, 80c; 2 doz. glass jars, $2.45 . .	3.25	
Sept.	12.	12 burners, 88c; 18 chimneys, $1.13 . . .	2.01	
		1 doz. glass jars, $1.05; 1½ doz. rubber bands, 21 .	1.26	
Nov.	4.	2 chamber sets, $65; 2 woven wire mattresses, $8 . .	73.00	
		1 toilet set, $2.50; 2 glass bottles, 66c; 26 chimneys, $1.64	4.80	

Dec.	23.	For 6 mugs, 50c; 3 plates, 30c; 7 cups and saucers, 70c; 3 vases, 14c . . .	$1.64	
1890.				
Feb.	21.	2 doz. chimneys, $3; 1 lamp shade, $1.50 . . .	4.50	
				$165.67

CLARK & ESTEY.

1889.				
Mar.	16.	For ½ gross buttons, 48c; 14 doz. cotton, $6.72 . .	$7.20	
April	30.	10 doz. combs, $3.50; 1 cartoon collars, 80c; tooth-brush, 10c . . .	4.40	
May	15.	6 great gross buttons, $1.80; box ruching, 25c; 1 piece elastic, 50c . . .	2.55	
June	7.	4 doz. cotton, $1.92; 17 doz. buttons, 85 . . .	2.77	
July	19.	27 boxes collars, $2.16; 2 doz. papers pins, 36c; 10 papers needles, 40c . . .	2.92	
Aug.	20.	5 trimmed hats, $4.75; 1 piece elastic, 40c; 8 doz. cotton, $3.84 . . .	8.99	
Sept.	2.	4 spools silk, 12c; 14 spools twist, 14c; 1⅓ gross buttons, 67c . . .	.93	
	21.	12 doz. papers pins, $1.80; 2 prs. hose, 42c; 1 pr. gloves, 21c . . .	2.43	
Nov.	4.	1 7/12 doz. undervests, $5.33; 12 doz. cotton, $5.76; ½ gross buttons, 25c . .	11.34	
Dec.	19.	4 pieces ribbon, $5.60; 8 doz. suspenders, $8; 4½ doz. handkerchiefs, $3.37 .	16.97	

Dec.	19.	For 8 doz. scarfs, $12.75; 8½ doz. mittens, $22.25; 2 doz. combs, $1.62 . . .	$36.62	
	21.	1⅓ doz. brushes, $3.58; 8 checker-boards, $1.36; 1 doz. mirrors, $1 . .	5.94	
		1 doz. collars, 75c; 11 boxes, $3.07; 2 doz. needle-books, $1 . . .	4.82	
		9 doz. cotton, $3.60; 1 doz. domino sets, 50c; 12 books, $1.75 . . .	5.85	
		16 prs. leggings, $4; 6 capes, $3.75; 3 plates, 38c .	8.13	
1890.				
Mar.	25.	1 gross combs, $4.50; 1 piece elastic, 50c; 5 doz. cotton, $2 . . .	7.00	
				$128.86

THOMAS W. LANE.

1889.				
Mar.	6.	For 4 doz. writing-books, $4; blank book, 30c . .	$4.30	
April	1.	6 copies Hooker's Natural Philosophy, $5.40; 1 gal. ink, $1.40 . . .	6.80	
				$11.10

WILLIAM H. VICKERY.

June	29.	For repairing locks, keys, clippers, and lawn mower .	$3.60	
Dec.	31.	repairing locks and keys and filing saws . . .	1.60	
				$5.20

N. C. GARLAND.

1888.				
Nov.	27.	For 19½ lbs. turkey, $4.49; 6 lbs. chicken, $1.32; celery, 25c	$6.06	

1889.			
April 3.	For 3½ lbs. steak, 53c; 1 qt. oysters, 40c . . .	$0.93	
Dec. 23.	31 lbs. chicken . . .	6.20	
1890.			
Jan. 24.	30 lbs. turkey . . .	7.75	
			$20.94

MANCHESTER ONE-PRICE CLOTHING CO.

1889.			
April 27.	For 1 overcoat, $5; 26 suits, $88.50; 38 hats, $13.50; 52 caps, $13 . . .	$120.00	
May 23.	2 shirts, $1.50; 2 boxes collars, 20c; bow, 15c; 4 prs. overalls, $2.20 . .	4.05	
20.	1 trunk, $2; 2 traveling bags, $3.50; 1 coat, $2 . .	7.50	
23.	1 pr. pants, $2.40; suspenders, 25c	2.65	
July 3.	1 pr. pants, $2.50; 2 prs. overalls, $1; suspenders, 25c	3.75	
Aug. 1.	1 suit, $8.50; 2 prs. socks, 50c; hat, 50c; satchel, $1.25; collar and tie, 30c	11.05	
Sept. 24.	2 suits, $16.50; pr. pants, $3.50; overcoat, $6.50; tie, 25c	26.75	
Nov. 2.	15 boxes collars, $1.25; 5½ doz. suspenders, $10.64; 13 prs. gloves, $6.75 .	18.64	
Dec. 25.	43 hats, $12.25; 30 mufflers, $17.30; 12 coats, $41; 6 prs. mittens, $3.25 . .	73.80	
1890.			
Mar. 14.	2 overcoats, $13; 2 suits, $16; underwear, 50c .	29.50	
			$297.69

CHARLES H. KIMBALL.

1889.				
Jan.	1.	For 1½ doz. harmonicas, $2.25 ; 1 tambourine, 60c . .	$2.85	
May	1.	music, 40c ; Gospel Hymns, 35c ; glue, 10c . .	.85	
Dec.	11.	2 music books, 70c ; harmonicas, $2.30 . . .	3.00	
				$6.70

JAMES T. FROST.

April	30.	For 7 bbls. hen manure		$5.25

C. E. COX.

		For 1,357 lbs. beef in April and May	$88.94	
July	8.	400 lbs. beef . . .	28.00	
Mar.	25.	378 lbs. beef . . .	28.35	
			$145.29	
		Credit, 2 qrs. beef	19.04	
				$126.25

E. R. COBURN & CO.

		For "Harper's Magazine," "Golden Days," "Home Journal," from April 1 to December 31, 1889 . .	$7.22	
Sept.	11.	1 box slate pencils, 35c ; paper and envelopes, 60c .	.95	
Oct.	15.	4 doz. writing-books, $5.40 ; 6 Franklin Readers, $3.24	8.64	
	18.	2 doz. multiplication cards, $1 ; box pens, 75c . .	1.75	
				$18.56

D. J. MURPHY.

1888.			
July	29.	For 1 plunger for water-closet, $1.75 ; labor, $1.35	$3.10

BENN F. MARSH.

1889.				
June	14.	For 199 lbs. veal, $17.91; 80 lbs. mutton, $6.40 . . .	$24.31	
July	27.	360 lbs. beef . . .	21.60	
				$45.91

G. W. INGALLS & CO.

June	5.	For 1 pr. boots, $2.60; 1 pr. brogans, $1.10; 1 pr. congress boots, $1.25 . . .	$4.95	
Aug	7.	3 prs. brogans . . .	3.45	
Dec.	4.	1 pr. shoes . . .	1.00	
				$9.40

T. HOLIHAN.

June	29.	For 3½ days labor		$5.75

REPUBLICAN PRESS ASSOCIATION.

April	30.	For advertising examination .	$1.25	
		"Independent Statesman," from January 1, 1890, to January 1, 1891 . .	1.25	
				$2.50

ELBRIDGE HILL.

April	16.	For 20 posts, $2; 54 bu. apples, $21.60; 1½ cords wood, $4.50	$28.10	
June	29.	200 ft. pine boards . .	4.50	
Aug.	16.	2 bu. pears, $5; 4 bu. apples, $2; 6 shotes, $24 . .	31.00	
		pasturing oxen six weeks .	8.00	
	17.	6 bu. Porter apples, $3; 5½ bu. pears, $11 . . .	14.00	
Sept.	27.	6½ bbls. apples, $9; 2 bu. pears, $3.50 . . .	12.50	
Oct.	3.	43 gals. vinegar, $7.74; 88 gals. cider, $8.80 . .	16.54	

Oct.	30.	For 125 lbs. veal, $10.35; pasturing 6 oxen seven weeks, $21	$31.35	
Nov.	27.	25 bbls. apples, $37.50; 80 lbs. veal, $7.20 . .	44.70	
1890.				
Mar.	26.	47 bbls. apples, $70.50; 4,800 feet chestnut lumber, $48 .	118.50	
		1,000 ft. pine boards, $15; 1,200 feet hemlock, $12; 1,404 lbs. beef, $91.20 .	118.20	
				$427.39

MANCHESTER STOCKING CO.

1889.				
May	1.	For 65 doz. assorted wool hose . . .		$97.50

JOHN B. CLARKE.

April	27.	For advertising examination .	$8.71	
May	3.	printing 500 programs .	2.00	
		"Daily Mirror and American," from February 1, 1889, to April 1, 1890 .	6.50	
				$17.21

J. F. WOODBURY & CO.

		For shoeing horses from April 25, 1889, to February 20, 1890		$31.12

CONCORD RAILROAD CORPORATION.

		For freight from February 8, 1889, to March 31, 1890		$211.16

WOMEN'S CHRISTIAN TEMPERANCE UNION.

June	29.	For religious services one year . . .		$150.00

L. BELLI.

July	4.	For 3 melons, 1 bunch bananas, 2 baskets peaches		$5.45

JOHN B. VARICK CO.

April	2.	For 100 lbs. Phœnix lead, $6.50; 1 gal. Pratt's drier, $1 .	$7.50
	5.	2 paint brushes, $1.35; sash tool, 15c; ball twine, 12c; 3 knobs, 40c; varnish, 20c	2.22
	11.	54 lbs. lath yarn, $7.02; 4 lbs. paint, 64c; 1 doz. pails, $1.25; 2 baskets, $1.34 .	10.25
	20.	1 gross screws, 43c; 5 manure forks, $2.80; 2 hoes, 70c; 2 shovels, $1.65 .	5.58
	30.	10 lbs. clover, $1.10; 1 lb. rivets, 30c; ¼ lb. burrs, 8c; egg beater, 30c .	1.78
May	3.	1½ doz. balls, $18.25; 6 bats, $3.50; gloves, $4.25; mask, $2.25 . . .	28.25
	6.	2 chains, 60c; ½ lb. spring steel, 6c; bu. grass seed, $2	2.66
	10.	12 lbs. clover seed, $1.40; 2 scrub brushes, 83c; lb. staples, 5c	2.28
	16.	1 lt. glass, 79c; 4 lbs. twine, 90c; 11 lbs. wire, 49c; wire stretcher, 50c . .	2.68
	20.	10 lbs. nails, 22c; 12 files, $2.50; 1 bu. grass seed, $2; 10 lbs. clover, $1 .	5.72
	25.	15½ lbs. wire, 66c; bull ring, 25c; wheel hoe, $8 .	8.91
June	14.	3¼ lbs. cast steel, 49c; 2 drag rakes, $1.20; 4 forks, $1.40	3.09
	20.	1 gal. paint, $1.50; 6½ lbs. rope, $1.04; 1 lb. washers, 10c	2.64

June	24.	For 2 hammocks, $2.75; ½ gal. sperm oil, 75c; can and oiler, 35c . . .	$3.85
	27.	10 lbs. Paris green, $2.50; 5 gals. oil, $3; 10 gal. can, $1.15	6.65
July	3.	67 lbs. nails, $1.86; 10 lbs. spikes, 25c; 2 files, 30c; 5½ lbs. rope, 94c . .	3.35
	6.	24 hay caps, $6; 1 bbl. oil, $31.80; 3 sickles, $1.14 .	38.94
	22.	1 sponge, 55c; 6 shovels, $3.75; 1 quire sand-paper, 20c	4.50
Aug.	8.	6 balls, $6; 2 lts. glass, 12c; 2 pick handles, 33 . .	6.45
	27.	1 plow point, 65c; 6 pails, 63c; sponge, 50c . .	1.78
Sept.	19.	brass padlock and harp, 88c; door bolt, 25c; 2 halter chains, 70c . . .	1.83
Oct.	1.	500 belt hooks, 33c; box clothes pins, 60c; whip, 50c	1.43
	12.	1 pinion and collar for manure spreader, $1; 6 axle pulleys, 12c . . .	1.12
		2 gals. asbestos slate roof paint, $2.70; paint brush, 50c	3.20
		50 lbs. Phœnix lead, $3.25; gal. asphaltum, $1; can, 15c	4.40
	16.	1 apple parer, 75c; 3 gals. lard oil, $2.25 . . .	3.00
Nov.	8.	1 meat chopper, $5.75; washers, 68c; 1 lt. ground glass, 15c . . .	6.58
	14.	12 brooms, $2; stable broom, 50c; shovel, 60c . .	3.10

Dec.	5.	For 3 lanterns, $1.50; 2 baskets, $2; lantern holder, 25c .	$3.75	
	24.	26 sleds, $16.07; shears, 85c; 6 papers tacks, 30c . .	17.22	
1890.				
Jan.	13.	1 set bells, 20c; horse clippers, $3.25; 2 pr. hinges, 20c	3.65	
	15.	1 set victor hangers, 75c; 6 ft. track, 30c; 3 gals. sperm oil, $3	4.05	
Feb.	13.	25 lbs. putty, 75c; ball twine, 15c; diamond glass cutter, $4	4.90	
	22.	2 packages plant food, 40c; whip, 35c; 3½ lbs. wire, 53c	1.28	
	24.	1½ lbs. packing, 45c; 1 gross screws, 38c . .	.83	
Mar.	17.	2 whitewash brushes, $6.50; 3 gals. oil, $2.25 . .	8.75	
	19.	6 lantern globes, 72c; vegetable seeds, 45c . .	1.17	
		12 scrub brushes, $2; 2 gals. turpentine, $1.20; can soap, $1.10 . . .	4.30	
	20.	1 sawhorse, 35c; step-ladder, $2.50; 2 brushes, 70c; sand-paper, 25c . .	3.80	
				$227.44

THE BOSTON HERALD CO.

1889.			
July	14.	For advertising	$7.25

GEORGE WESTON.

July	18.	For 1 trunk	$2.25

EUGENE BRETON.

July	19.	For 14 days' labor haying	$28.00

R. H. PRINCE.

July 27.	For 1 pair oxen		$106.75

C. B. LITTLEFIELD.

July 29.	For 1 bottle cough medicine . . .		$0.85

J. E. BUERK.

July 3.	For 500 dials for watchman's watch . .		$1.85

JOHN F. CHASE.

Aug. 1.	For 4 bbls. hen manure		$3.00

ESTATE OF M. F. DODGE.

1888.			
Nov. 22.	For 47 lbs. chicken		$8.46

J. E. STONE.

1889.			
Aug. 23.	For 1 bu. blackberries		$2.24

H. J. RHODES.

Aug. 26.	For 1 bookcase, $15 ; 1 wardrobe, $10 .		$25.00

I. C. MERRILL.

July 3.	For 1 pr. oxen	$130.00	
Dec. 31.	4,823 lbs. meadow hay .	24.23	
			$154.23

DYER, RICE & CO.

Aug. 16.	For two dozen hats		$9.00

F. P. PROCTOR.

Aug. 21.	For 1 large can axle oil . .	$1.15	
1890.			
Feb. 6.	3 gals. axle oil . . .	1.75	
			$2.90

MAXWELL & CAMPBELL.

1889.				
Mar.	30.	For ice at pond to fill ice house .	$15.00	
Oct.	23.	47 cakes ice . . .	14.10	
				$29.10

MCLAUGHLIN & DOLAN.

April	8.	For hanging 26 rolls paper and 2 rolls border	$4.40

HORACE WILLEY.

Sept.	3.	For building 22 rods face stone wall . .	$50.00

TOM W. ROBINSON.

May	8.	For 259 lbs. beef	$18.13

BLAKE & STEARNS.

Sept.	25.	For 271 yds. cassimere	$445.80

DAILY PRESS PUBLISHING CO.

May	1.	For advertising annual examination	$4.50	
		"Daily Press" from May 1, 1889, to April 1, 1890 .	3.50	
				$8.00

WESTERN UNION TELEGRAPH CO.

		For telegrams from May 29, 1889, to March 31, 1890	$4.70

J. H. CRAM.

		For shoeing oxen from April 1, 1889, to January 31, 1890	$35.50

E. S. NEWTON.

Aug.	29.	For 100 lbs. haddock, $5; 6 lbs. mackerel, $1.50 . .	$6.50	
Sept.	6.	40 lbs. haddock, 60c; 4 lbs. mackerel, 80c . . .	2.80	

Sept.	13.	For 24 lbs. haddock, $1.20; 8 lbs. halibut, $1.28 . .	$2.48	
	20.	30 lbs. haddock, $1.80; 11 lbs. halibut, $1.76 . .	3.56	
	27.	6 lbs. mackerel, $1.20; 6 lbs. halibut, 96c; 22 lbs. haddock, $1.10 . . .	3.26	
Oct.	5.	6 lbs. mackerel, $1.20; 40 lbs. haddock, $2; 6¼ lbs. halibut, $1 . . .	4.20	
	18.	6¼ lbs. halibut, 88c; 3 lbs. pickerel, 42c . . .	1.30	
Nov.	14.	49¼ lbs. fish, $4.02; 1 box boneless cod, $2.40 . .	6.42	
Dec.	55.	3 gals. oysters, $3.75; 41 lbs. haddock, $2.46 . .	6.21	
1890.				
Jan.	10.	89 lbs. fish	5.15	
	31.	123 lbs. haddock, $6.40; 5 lbs. halibut, 80c . .	7.20	
Feb.	4.	36 lbs. boneless cod, $2.25; 13 lbs. halibut, $1.92 .	4.17	
	21.	54 lbs. fish	4.08	
Mar.	1.	3 qts. oysters, $1.05; 3 lbs. crackers, 30c . . .	1.35	
	8.	9 lbs. fish, $1.19; 3 qts. oysters, $1.05; 4 lbs. crackers, 40c	2.64	
	29.	48½ lbs. fish . . .	3.36	
April	3.	3 qts. oysters, $1.05; 12 lbs. haddock, 72c . . .	1.77	
				$66.45

J. C. RAY.

Mar.	1.	For 41⅜ cords wood		$103.43

R. W. LAMPREY.

1889.				
Sept.	21.	For brake to large wagon, $5; painting wagon, $10 . .	$15.00	

Oct.	8.	For painting and repairing top buggy and wagon . . .	$15.50	
				$30.50

NORTHERN EXPRESS.

		For bundles and boxes by express, from September 9, 1889, to March 30, 1890 . .		$3 50

FREDERICK C. DOW.

April	29.	For 97 prs. boys' boots and shoes, $124.33 ; 9 prs. girls' shoes, $12.47	$138.05	
Sept.	16.	18 prs. canvas shoes, $25.02 ; 16 prs. brogans, $21.68 .	46.70	
Dec.	10.	24 prs. rubbers . . .	9.12	
				$193.87

HAWLEY & GILBERT.

April	30.	For 9 yds. oilcloth, $2.25 ; 56½ yds. cotton, $4.18 ; 1 yd. bunting, 25c . . .	$6.68	
July	8.	4 doz. hose, $4.42 ; 109¾ yds. crash, $10.24 . .	14.66	
Aug.	23.	4 doz. napkins, $7.95 ; 117½ yds. dress goods, $23.50 .	31.45	
		213 yds. print, $14.91 ; 141½ yds. shirting, $7.08 . .	21.99	
Nov.	16.	10 yds. cretonne, 90c ; 40 yds. crash, $3.50 . .	4.40	
	26.	61 yds. cambric, $2.75 ; 96 yds. jean, $6.47 . .	9.22	
		1 doz. towels, $2.75 ; 3 doz. napkins; 23¾ yds. damask, $14.74	22.29	
				$110.69

PETTEE & ADAMS.

April	5.	For 5 bags corn, $4.60; 5 bags meal, $4.60; 10 bags oats, $8.50; 1,291 lbs. bran, $12.37	$30.07	
	11.	2 casks lime, $2.20; 2 bags salt, $1.50; 4 lbs. hair, 16c; cement, $3.75 .	7.61	
June	27.	1 bag rye meal, $1.60; 50 lbs. plaster, 25c; 1 bag salt, 80c	2.65	
July	27.	12 bags corn, $11.25; 10 bags meal, $9.35; 12 bags oats, $10.15; 1,660 lbs. bran, $15.46 . . .	46.21	
Aug.	28.	1 bag corn, $1.05; 15 bags meal, $14.93; 6 bags oats, $5.10; 677 lbs. bran, $6.10; 12 bbls. flour, $75	102.18	
Sept.	25.	25 bags meal, $23.30; 15 bags oats, $12; 1,050 lbs. bran, $9.19; 1 bbl. cement, $1.50	45.99	
Dec.	10.	1 bag salt, 75c; 15 bags meal, $14.25; 5 bags corn, $4.75; 5 bags oats, $4 . .	23.75	
1890.				
Jan.	14.	2 bags oats, $1.50; 20 bags meal, $17; cement, 60c .	19.10	
Mar.	22.	10 bags corn, $8.50; 15 bags oats, $11.25; 1,350 lbs. bran, $13.05; 5 bags cottonseed, $6.75 . .	39.55	
				$317.11

R. M. ROLLINS & SON.

1889.			
July	1.	For 1 beater roll for spreader, $7; tedder fork, 40c; 6 sections, 60c . . .	$8.00

J. TRUESDALE & SON.

Oct.	4.	For 2 trunks		$3.00

SANBORN CARRIAGE CO.

Jan.	30.	For repairing sleigh, $1.25 ; nose bar, $1	$2.25	
July	25.	1 new pole	17.00	
				$19.25

G. W. DODGE.

April	22.	For 4 prs. shoes, $5.85 ; 7 prs. button boots, $8.50 . .	$14.35	
Sept.	21.	12 prs. shoes, $9 ; 1 pr. brogans, $1.25 ; 1 pr. boots, $3	13.25	
Oct.	31.	24 prs. boots, $50.58 ; 12 prs. brogans, $14 . . .	64.58	
Nov.	12.	6 prs. slippers, $1.80 ; 6 prs. rubber boots, $16.50 .	18.30	
Dec.	30.	33 prs. brogans, $34 ; 1 umbrella, 50c . . .	34.50	
1890.				
Jan.	23.	3 prs. wool boots, $3.75 ; 3 prs. rubber overshoes, $4.05	7.80	
Mar.	27.	6 prs. shoes, $10.90 ; 14 prs. rubber boots, $31.14 .	42.04	
				$194.82

L. T. MEADE.

1889.				
July	3.	For fireworks, $3.34 ; 3 rubber balls, 30c ; 6 dozen slate pencils, 30c . . .	$3.94	
Dec.	31.	2 books, $1.90 ; ½ doz. slates, 38c . . .	2.28	
		"Boston Journal" from January 1, 1889, to April 1, 1890	7.50	
				$13.72

HIGGINS BROTHERS CO.

April	22.	For 2 doz. chimneys, $1.50; repairing hat tree, $1.25 .	$2.75	
July	11.	7 gravy tureens, $3.13; 3 butter plates, $1.26; 2 doz. plates, $2 . . .	6.39	
		3 doz. ind. butters, 99c; 3 doz. sauce plates, $1.20; 2 doz. teaspoons, $5 . .	7.19	
		2 doz. plated knives, $7; 2 doz. forks, $7; ½ doz. glass dishes, $1.08 . .	15.08	
1890.				
Feb.	5.	2 doz. chimneys, $1.90; 4 bean pots, $1.42 . .	3.32	
				$34.73

MANCHESTER HEATING & LIGHTING CO.

1889.			
April	4.	For 1 iron pail, 50c; 1 elbow, 30c; pipe and coupling, 15c	$0.95
May	15.	2 teapots, 66c; 1 lb. solder, 25c; 1¾ lbs. lock nuts, 10c	1.01
June	17.	hemp, 25c; labor, $4.98 .	5.23
Oct.	13.	1 doz. chimneys, 98c; tin pail, 15c. . . .	1.13
	29.	7 lamps, $3.10; 5 reflectors, $1.50; 3 lamp brackets, 84c	5.44
Nov.	6.	labor and stock repairing steam pipes . . .	3.50
Dec.	11.	12 burners, 96c; 6 chimneys, 48c; oil can, 50c . .	1.94
	7.	stock and labor repairing steam and water pipes .	4.35
1890.			
Jan.	13.	2 doz. chimneys, $1.60; 1 sheet zinc, $1.40 . .	3.00
Feb.	5.	1 agate pail and attachment, $4; 9 pails, $5.02 . .	9.02

Mar.	27.	For 2½ lbs. stovepipe, 25c; 1 elbow, 25c	$0.50	
				$36.07

WILLIAMS & CO.

1889.				
July	25.	For 2 soapstone water-tanks .	$65.03	
1890.				
Feb.	20.	2 sets soapstone washing-tanks	29.00	
				$94.03

LEROCQUE & DESROSIERS.

1889.				
Oct.	5.	For extracting inmates' teeth . . .		$1.00

FREDERICK ALLEN.

April	6.	For repairing bridle and check, 20c; whip socket, 50c .	$0.70	
May	25.	6 plumes, $2; repairing trace and bridle, 85c . .	2.85	
	30.	12 flags, $3; 6 straps, 50c; repairing trace, 50c . .	4.00	
June	17.	1 whip, $1.25; saddle pad, 75c; repairs on breast-plate, 30c . . .	2.30	
Aug.	26.	1 hitch rope, 25c; whip, 25c; spread straps, 40c; 4 rings, 25c	1.15	
Oct.	17.	4 blankets, $14.50; 2 halters and chains, $4 . .	18.50	
Dec.	26.	repairs on harness, $2.45; 4 blankets, $7 . . .	9.45	
1890.				
Jan.	17.	1 bit, $2; 2 team collars, $8; pr. hames, $2 . . .	12.00	
Feb.	22.	6 whips, $2.25; rope halter, 25c	2.50	
Mar.	26.	1 strap, 15c; set blanket rings, 35c; harness repairs, 65c	1.15	
				$54.60

CLOUGH & CO.

1889.			
June 17.	For 102 lbs. lard . . .	$9.18	
1890.			
Jan. 1.	16½ lbs. ham . . .	1.73	
			$10.91

JOHN F. GILLIS.

1889.			
May 29.	For 1 pr. rubber boots, $2.25; 2 prs. shoes, $4.05 . .	$6.30	
Oct. 2.	4 prs. brogans, $4.60; 1 pr. shoes, $1.35 . . .	5.95	
			$12.25

NEW HAMPSHIRE FIRE INSURANCE CO.

Sept. 29.	For insurance on buildings . . .		$105.00

WHEELER & WILSON MANUFACTURING CO.

Sept. 30.	For 1 sewing-machine . .	$40.00	
	Credit, 1 old machine . . .	10.00	
			$30.00

J. STICKNEY.

April 24.	For 1 gross shoe lacings, 75c; rubber cloth, 10c . .	$0.85	
Sept. 30.	40 ft. round belting . .	2.00	
Dec. 2.	21¼ lbs. leather, $4.68; 15 awls, 25c; 1 bottle blacking, 20c	5.13	
5.	3 shoe knives, 40c; ½ lb. shoe tacks, 10c; 3 lbs. nails, 30c . . .	.80	
16.	1 kip skin, $2.56; eyelet set, 65c; box eyelets, 20c .	3.41	
19.	24½ lbs. leather, $5.34; 2 lbs. nails, 10c; 2 balls thread, 20c . . .	5.64	
25.	1 foot ball, $1.25; 5 prs. lasts, $1.25 . . .	2.50	

1890.				
Jan.	7.	For 26¼ lbs. leather, $5.78; shaft rubbers, 10c; awls and hafts, 55c . . .	$6.43	
Feb.	5.	23¼ lbs. leather, $5.12; 5 lbs. nails, 60c; 1 kip skin, $2.88	8.60	
	13.	1 can harness dressing, 45c: ½ gal. oil, 55c; 6 balls thread, 60c . . .	1.60	
	19.	1 bunch shoe lacings, 75c; 3 safety pins, 10c; doz. wax, 10c . . .	.95	
	24.	25½ lbs. leather, $5.61; kip skin, $2.88; 2 leather lashes, 15c . . .	8.64	
Mar.	3.	12 sewing awls, 20c; bottle blacking, 20c; 1 lb. tacks, 15c	.55	
	12.	22 lbs. leather, $4.84; 2 gals. oil, $2.20; 4 lbs. nails, 30c	7.34	
	27.	2¾ lbs. calf-skin . .	2.06	
				$56.50

L. M. SAWYER.

1889.			
Sept.	30.	For 30 prs. kid and goat button boots . .	$48.00

J. W. PITMAN & SON.

Oct.	10.	For 200 postal cards and printing . .	$3.25

LYMAN GIBBS & CO.

Oct.	9.	For 28 undershirts and drawers . . .	$10.00

CHARLES P. CONNOLLY.

Oct.	11.	For services in chair shop	$5.00

B. S. SNOW & CO.

Oct.	9.	For 100 lbs. codfish	$5.00

GEORGE T. DUNFIELD.

Oct.	12.	For arresting John Tobin, $12; 1 pr. boots, $2	$14.00

A. W. SUMNER.

Oct.	29.	For pasturing 4 oxen and steers, $29.60; expenses getting cattle, $3 . . .	$32.60

THE GLOBE NEWSPAPER CO.

Oct.	22.	For advertising	$12.25

M. L. BUTTERFIELD.

Oct.	31.	For 135 bu. charcoal	$17.55

H. M. WHITING.

Nov.	1.	For 50 tulip bulbs	$2.50

JOHN H. FARMER.

Nov.	1.	For 234 lbs. butter	$32.16

MRS. A. F. HALL.

Nov.	2.	For one copy "My Story of the War" .	$4.00

CAMPBELL & WILLIAMS.

Nov.	2.	For 100 postals and printing, $1.65; 50 note circulars, 65c	$2.30

THE HARTFORD WOVEN WIRE MATTRESS CO.

Oct.	17.	For 120 bedsteads, $660; 120 cotton felt mattresses, $360; burlap, $6 . .	$1,026.00

GEORGE L. BROWN.

Oct.	4.	For 1 Hill's hame collar harness . . .	$45.00

J. G. ELLINWOOD.

Nov.	5.	For 5 doz. photographs	$5.00

E. J. WILLIAMS.

Oct.	3.	For repairing roof	$2.55

A. G. FAIRBANKS.

Nov.	12.	For 6 bu. beans	$9.00

OLIVER DITSON CO.

Nov.	12.	For 50 singing-books, "Bright Array" .	$14.25

JOHN D. WELCOME.

Nov.	23.	For setting tire	$1.75

GEORGE BLANCHET.

Dec.	3.	For 1 doz. undershirts, $3.25 ; 1 doz. drawers, $3.25	$6.50

H. L. HALL & CO.

July	10.	For 2 doz. teaspoons, $3.50 ; 1½ doz. knives, $3	$6.50

DEWOLFE, FISKE & CO.

Nov.	8.	For 32 vols. for library from Miss Penhallow fund	$23.22

JOSEPH A. BROWN.

Dec.	17.	For 2 cords manure	$5.00

CHALIFOUX & CO.

Dec.	20.	For 8 doz. ties	$6.65

E. R. BARRY.

Dec.	25.	For 15 lbs. oyster crackers	$1.35

D. J. ADAMS.

Nov.	26.	For repairing clock	$1.50

A. C. KENISTON.

Dec. 30.	For tending and salting cattle and mending pasture fence		$7.00

SAMPSON, MURDOCK & CO.

Dec. 31.	For Manchester Directory, 1890 . . .		$2.00

GEORGE H. TANSWELL.

Dec. 31.	For 77¾ yds. denim		$10.10

SEARS & CO.

Oct. 10.	For 1 hhd. molasses, $48.28; carting, 50c . . .	$48.78	
1890.			
Jan. 28.	1 hhd. molasses, $35.09; box prunes, $4.40; 30 lbs. coffee, $9 . . .	48.49	
	3 boxes raisins, $3.70; 1 chest tea, $6.67; 1 bag rice, $6.20	16.57	
	1 bbl. oatmeal, $6.10; 1 case peaches, $4.50; box starch, $1.20	11.80	
	1 box soap, $4.80; 1 doz. Jamaica ginger, $1.95 .	6.75	
			$132.39

WINSLOW, RAND & WATSON.

1889.			
Oct. 18.	For 241 lbs. coffee, $26.51; 32 lbs. coffee, $16; can, 70c		$43.21

PLUMER & HOLTON.

Sept. 16.	For 1 gross studs, 62c; hat, 87c; tie, 25c; suspenders, 20c.	$1.94	
Dec. 6.	8 prs. drawers, $2; cutting patterns, $1 . . .	3.00	
			$4.94

EDWARD C. SMITH & CO.

Sept. 16.	For 3 bottles cough medicine, $2.40 ; 1 bottle sarsaparilla, 80c	$3.20	
Oct. 16.	1 qt. paregoric, $1.25 ; witch-hazel, 65c ; plaster, 10c .	2.00	
Nov. 25.	2 prescriptions, $1 ; iodine, 15c ; Boschee's Syrup, $1.30	2.45	
	1 gal. alcohol . . .	2.50	
1890.			
Jan. 11.	1 gal. witch-hazel, $1 ; 2 boxes Seidlitz powders, 50c ; niter, 50c . .	2.00	
Feb. 26.	2 prescriptions, $1.25 ; lime water, 10c . . .	1.35	
Mar. 8.	2 bottles Boschee's Syrup, $1.30; toilet paper, $3 .	4.30	
			$17.80

MOORE & PRESTON.

1889.			
May 21.	For 1 ton coal, $7.50 ; 400 lbs. guano, $7 ; weighing hay, 12c	$14.62	
Nov. 11.	1 ton egg coal, $7 ; 2,100 lbs. stove coal, $7.87 .	14.87	
			$29.49

E. T. JAMES.

	For stabling horses from January 1, 1889, to April 1, 1890	$12.50

L. M. ALDRICH.

Dec. 21.	For laying floor	$4.38

EAMES BROS.

July 6.	For 1 gal. witch-hazel, $1 ; 1 gal. alcohol, $2.50 . . .	$3.50	

1890.			
Feb. 17.	For 1⅛ gals. witch-hazel, $1.13; 2 oz. magnesia mixture, 10c	$1.23	
	prescriptions from January 31 to March 25, 1890 .	5.90	
			$10.63

W. D. LADD & CO.

	For crackers from June 25 to August 29, 1889		$6.24

D. S. KIMBALL.

1889.			
Nov. 6.	For 1 whip, $1; 6 surcingles, $1.50; halter, $1.20 .	$3.70	
1890.			
Jan. 21.	3 bits, $2.50; repairing, 70c	3.20	
			$6.90

PETER GAINES & CO.

	For 1,116 gals. soft and 8 boxes hard soap from October 5, 1889, to March 27, 1890 . .	$136.66	
1889.			
Nov. 20.	1 gross bluing . . .	12.00	
		$148.66	
	Credit, bones and grease . . .	6.63	
			$142.03

MERRILL & FREEMAN.

Aug. 30.	For 1 bag meal, $1; 25 bbls. flour, $150	$151.00	
Oct. 25.	15 bags meal, $13.50; 5 bags corn, $4.50; 6 bags oats, $4.50; 1,035 lbs. bran, $8.80	31.30	
Nov 16.	10 bbls. flour, $56.50; 3 bags meal, $2.76; 1,150 lbs. bran, $10.35 . . .	69.61	

1890.				
Jan.	3.	For 15 bbls. flour . . .	$83.25	
				$335.16

THOMAS A. LANE.

		For labor and stock on steam and water pipes from January 1, 1889, to January 1, 1890		$87.42

J. B. BARIL.

1889.				
Nov.	4.	For 2 bottles German syrup, $1.40; 1 oz. bismuth, 25c		$1.65

JOHN N. FOSS.

Nov.	30.	For clipping 4 horses		$8.00

A. J. SAWYER.

Dec.	12.	For 452 ft. hard wood lumber .	$19.44	
1890.				
Jan.	31.	304 feet sheathing, $6.08; 2,000 shingles, $4 . .	10.08	
				$29.52

HILL & COMPANY EXPRESS.

		For express on crates, boxes, and bundles from January 1 to November 9, 1889 .		$1.45

H. W. PALMER.

Mar.	31.	For making and mending shoes 4 months .		$48.00

HEAD & DOWST.

1889.				
Nov.	1.	For labor and materials building addition to work-shop		$573.16

W. F. HEAD & SON.

Sept.	25.	For 28,000 brick		$175.00

I. S. YORK.

For repairing and oiling harnesses from January 1 to December 31, 1889 . . . $21.80

HENRY STEIN.

For blacksmith repairs on wagons, sleighs, and chains from December 28, 1889, to February 26, 1890 . . . . . $34.08

GEORGE W. RILEY.

Dec. 24. For 30 doz. hosiery boards . . . $27.15

WEARE WOOLEN MILL.

Nov. 14. For 4 Abel topping machines . . . $170.00

FRANK H. CHALLIS.

For "Weekly Budget" from January 1, 1890, to January 1, 1891 . . . $1.50

JAMES E. BARNARD.

1890.
Jan. 20. For 3,264 lbs. meadow hay . . . $16.32

A. A. POTTER.

1889.
Aug. 1. For 2 cords manure, 1 bbl. hen manure . $8.19

H. L. LAWRENCE & CO.

1890.
Jan. 27. For 53 lbs. turkey, $10.07; 11½ lbs. chicken, $1.72 . . . . . $11.79

E. W. WALKER & CO.

Jan. 31. For 58 books of "Voyages and Travels" . $14.50

F. L. WALLACE & CO.

Feb. 10. For 5 gals. disinfectant $5.00

D. C. HEATH & CO.

Feb.	7.	For 36 "Hyde's Lessons in English" .	$18.00

A. S. BARNES & CO.

Feb.	5.	For 4 doz. writing-books	$3.20

JOHN ROBINSON.

Feb.	10.	For 3,317 lbs. bedding	$16.53

RICHARD J. BURCHILL.

Feb.	11.	For 1 vol. "Earth, Sea, and Sky" . .	$3.00

JOHN BERGAMAN.

1889.			
July	4.	For cakes and doughnuts	$8.56

WAKEFIELD RATTAN CO.

Sept.	28.	For 1 bale cane	$60.00

J. HODGE.

1890.			
Jan.	19.	For 50 pickets, $2.25; 12 balusters, 39c; 8 ft. sapling, 20c; labor, 10c . . .	$2.94

F. H. ROBINSON.

1889.			
Dec.	23.	For 25 lbs. rice corn	$1.00

JORDAN, MARSH & CO.

1890.			
Mar.	4.	For 465 yds. denim, $57; express, 90c .	$57.90

N. O. GARLAND.

Mar.	7.	For 25 days' labor	$31.25

C. R. BAKER.

Mar.	22.	For 4½ days' labor laying floor . . .	$3.15

E. W. FOSTER.

Mar. 26.	For 119 lbs. butter	$15.92

JOEL SHUSHON.

Mar. 29.	For labor on farm	$13.75

WORCESTER FIRE APPLIANCE CO.

Mar. 15.	For 12 chemical fire pails	$26.00

HORACE MARSHALL.

Mar. 17.	For 106 lbs. butter	$15.90

MANCHESTER HORSE RAILROAD.

Mar. 15.	For manure	$66.50

J. A. HESELTON.

Mar. 31.	For labor laying floor	$4.25

MANCHESTER PROVISION CO.

Feb. 5.	For butchering 2 hogs	$2.00

A. D. MAXWELL.

Mar. 25.	For 500 cakes ice	$20.00

D. H. YOUNG.

Nov. 15.	For repairing roof	$3.00

HARLEY & ROBBIE.

1889.			
Dec. 21.	For 7 pieces ribbon, $5.70; 18 doz. handkerchiefs, $11.78	$17.48	
	44 yds. check muslin, $4.22; 66 yds. Lonsdale, $6.92 .	11.14	
1890.			
Mar. 31.	96¼ yds. print, $5.29; 43½ yds. gingham, $3.26; 7 yds. oilcloth, $1.33 . .	9.88	

Mar.	31.	For 238¾ yds. wool dress goods, $83.57; 1 book, $1 . .	$84.57	
				$123.07

J. E. STEARNS & CO.

Jan.	31.	For fish and beef	$17.28

WARREN HARVEY.

Mar.	31.	For 149⅜ cords wood	$485.06

GEORGE B. APPLETON & CO.

April	1.	For 6 key rings	$1.00

POST-OFFICE.

	For box rent from April 1 to October 1, 1890	$3.00

E. BARNARD.

April	16.	For 1,047 lbs. bedding	$5.23

CAVANAUGH BROS.

April	17.	For 2 horse blankets	$4.50

WOMAN'S CHRISTIAN TEMPERANCE UNION.

April	18.	For religious services one year . . .	$150.00

E. W. FOSTER.

April	18.	For 96 lbs. butter . . .	$11.52	
Aug.	16.	49 doz. eggs . . .	10.78	
				$22.30

J. B. BLOOD & CO.

April	23.	For 50 lbs. butter	$5.00

FIRST CONGREGATIONAL SOCIETY.

	For rent of three seats from April 1 to October 1, 1890	$16.80

SHIRLEY & STUART.

April 8.	For 14½ days' whitewashing and mason repairs . . .	$63.75	
Aug. 24.	6 days' mason work, $19.25 ; stock, $4.50 . . .	23.75	
			$87.50

H. M. WHITING.

April 26.	For nursery stock	$26.50

JAMES H. BROWN.

April 30.	For 33 days' work painting . . .	$57.75

H. W. PALMER.

May 1.	For making and mending shoes one month .	$13.00

J. TRUESDALE & SON.

April 30.	For 3 trunks	$6.35

F. L. WALLACE & CO.

Mar. 28.	For coffin, etc., for Joseph Gagner . .	$17.00

DANIEL W. BILL.

April 10.	For 109½ lbs. maple sugar, $10.95 ; 10 gals. maple syrup and keg, $11 . .	$21.95	
	expenses attending 2 trustee meetings	14.00	
			$35.95

TELEGRAPH PUBLISHING CO.

April 26.	For advertising annual examination . .	$1.50

JOHN ROBINSON.

May 9.	For 830 lbs. oat straw	$4.15

CUMMINGS BROS.

April 12.	For hanging 103 rolls wall paper and glue for sizing ceiling .	$26.20

June 18.	For 42 lbs. paint, $5.04; painting and hanging paper, $3.45 .	$8.49	$34.69

HARTFORD STEAM-BOILER INSPECTION AND INSURANCE CO.

May 13.	For insurance on steam boilers . . .	$30.00

ST. ALBANS FOUNDRY.

April 19.	For 12 lag irons, $4.20; 6 rollers, $1.08 .	$5.28

CHARLES M. COBURN.

May 16.	For 38 days' labor	$38.00

A. WIGGIN.

May 24.	For 15 days' labor	$11.45

A. R. PHIPPEN.

April 29.	For 2 days' labor laying floor . . .	$5.00

DAVIS & GOODWIN.

June 3.	For repairing horse power	$2.50

MCIVER & FOLLANSBEE.

June 3.	For putting in machinery	$15.00

I. C. MERRILL.

April 22.	For 13,910 lbs. meadow hay . . .	$69.60

HENRY STEIN.

Mar. 28.	For blacksmith repairs from March 1 to March 28, 1890	$4.40

FREDERICK ALLEN.

April 12.	For 1 boot, 75c; harness, $25; collar, $2.50 . . .	$28.25	
30.	5 horse blankets, $5.87; carriage mat, $1.50; halter, $1.25	8.62	

May	15.	For harness, $32.50; rope, 20c; 12 rings, 65c; 2 straps, 50c	$33.85	
	30.	6 flags, 25c; 2 plumes, 50c .	.75	
July	1.	difference in harness and collar, $11.50; whip-lash, 50c	12.00	
		harness repairs from June 12 to August 22, 1890 . .	11.95	
				$95.42

G. W. INGALLS & CO.

April	26.	For 39 prs. shoes, $31.20; blacking, 10c .		$31.30

F. P. KIMBALL.

April	24.	For 39 suits, $90; 2½ doz. hats, $10.87; 14 boxes collars, $1.26	$102.13	
	26.	26 suits, $122; 2 shirts, hat, tie, and collar, $2.63 .	124.63	
				$226.76

F. P. PROCTOR.

June	10.	For 3½ gals. axle oil		$2.00

G. A. CLARK.

June	7.	For filing 10 saws		$1.50

MERRILL & FREEMAN.

April	17.	For 20 bbls. flour . . .	$110.00	
Aug.	2.	400 lbs. bran, $4.20; 3 bags oats, $3; 12 bags meal, $15	22.20	
				$132.20

J. E. BUERK.

June	3.	For keys and repairing watchman's watch .		$8.00

L. M. ALDRICH.

Mar.	27.	For 1¾ days' labor carpenter repairs	$4.38	
Sept.	30.	40 lathes, $12; 7 days' labor on barn and shop . .	11.75	
				$16.13

E. E. COLBURN.

April 14.	For 1½ lbs. ginger, 30c; 40 gals. vinegar, $8.80 . . .	$9.10	
July 28.	1 box starch, 60c; 4 melons, $2.05; vanilla, 60c; salt, 25c	3.50	
			$12.60

WESTON & HILL.

Aug. 5.	For 16⅙ yds. oilcloth	$4.04

DANIEL FARMER.

June 27.	For 2,864 lbs. bedding	$12.88

THOMAS BENWAY.

June 30.	For 3 months' labor on farm .	$66.75	
July 29.	2 days' labor haying . .	2.50	
			$69.25

CHESTER E. BOOTH.

Aug. 8.	For 2 months' labor on farm . . .	$55.00

J. H. CRAM.

	For shoeing oxen from February 10 to August 20, 1890	$13.25

AMERICAN EXPRESS CO.

	For bundles, boxes, etc., by express from January 28 to April 23, 1890 . . .	$2.70

SEARS & CO.

April 21.	For 1 hhd. molasses, $33.32; carting, 50c	$33.82	
July 2.	2 bbls. molasses, $26.26; bag rice, $6.20 . . .	32.46	
	100 lbs. codfish, $5.50; bbl. sugar, $21.48; carting, 38c	27.36	
			$93.64

J. STICKNEY.

April	3.	For 1 football, $1.50 ; 24 lbs. sole leather, $5.28 . . .	$6.78	
	7.	4¾ lbs. kip-skin, $4.75 ; shaft rubbers, 30c ; 12 awls, 10c	5.15	
May	16.	1 paper tacks, 5c ; bar soap, 50c ; bunch lacings, $1.15	1.70	
July	19.	1 can harness dressing . .	.50	
Sept.	20.	1 pr. oil overalls, $1.25 ; rubbers, 65c ; lb. beeswax, 40c	2.30	
			———	$16.43

CLARK & ESTEY.

April	4.	For 1,000 marbles, 50c ; 1½ doz. braid, 90c ; 2 doz. cotton, 80c	$2.20	
	10.	12 spools twist, 24c ; 6 doz. whalebones, 60c ; 1 piece elastic, 36c . . .	1.20	
May	2.	5 hats, $4.46 ; 4 doz. hose, $5 ; 2⅓ gross buttons, $1.20	10.66	
June	24.	4 yds. tarlatan, 68c ; 7 doz. cotton, $2.80 . . .	3.48	
			———	$17.54

A. N. CLAPP.

	For 5 bbls. kerosene from May 2 to September 30, 1890	$26.74

DAILY PRESS PUBLISHING CO.

April	29.	For advertising in "Press" and "Budget" . . .	$8.25	
		"Daily Press" from April 1 to November 1, 1890 .	2.75	
			———	$11.00

DRAKE & PARKER.

June	19.	For 1 case cr. wheat, $2.50; 800 lbs. middlings, $8 . .	$10.50	
	27.	700 lbs. bran, $6.83; 10 bu. oats, $4.20 . . .	11.03	
				$21.53

G. W. DODGE.

April	28.	For 11 prs. boys' shoes, $14.30; 2 prs. canvas shoes, $1 .	$15.30	
June	2.	5 prs. kid boots, $6; 3 prs. Oxford ties, $3.15 . .	9.15	
Aug.	26.	2 prs. button boots, $2.75; 5 prs. shoes, $6.50 . .	9.25	
				$33.70

L. M. FRENCH, M. D.

		For professional attendance on inmates from January 1, 1889, to March 24, 1890 .	$60.00

HIGGINS BROTHERS CO.

April	30.	For 1 lounge, $19; 6 chimneys, 35c; 6 chairs, $13.50; 6 pitchers, $1.88 . .		$34.73

CHARLES A. HOITT & CO.

April	8.	For bedstead, $3; mattress, $3; slat spring, 92c . .	$6.92	
	24.	6 doz. plates, $4.70; 3 doz. cups, $4.05; 12 salts, 42c; 6 pitchers, $2.10 . .	11.27	
	29.	12 chairs, $17; hat rack, $5.25; 4 creamers, 80c .	23.05	
July	10.	1 pitcher, $2; doz. tumblers, $2.75; 19 chimneys, $2.10	6.85	
Aug.	7.	1 toilet set, $2.50; 2 spoons, 20c; 2 dippers, 15c; basket, 25c	3.10	

Sept. 24.	For 1 fork, 7c; qt. measure, 5c; tunnel, 7c; double boiler, 45c	$0.64	
	12 pie plates, 90c; 24 butters, 60c; 2 pitchers, $1 . .	2.50	
	2 covered dishes, $1.20; 2 doz. salts, 80c . . .	2.00	
	2 doz. mugs, $2; 1 doz. vinegar bottles, $1.80 . .	3.80	
			$60.13

PETTEE & ADAMS.

April 18.	For 35 bags meal, $31.92; 10 bags oats, $7.85; 2,200 lbs. bran, $22.70; 700 lbs. cottonseed, $9.10 . .	$71.57	
May 20.	40 bags meal, $37.05; 18 bags oats, $15.70; 2,056 lbs. bran, $23.49; cement, 20c	76.44	
June 18.	7 bags meal, $6.30; 20 bags oats, $17.25; 1,900 lbs. bran, $20.50; 5 bbls. lime, $5.50	49.55	
July 28.	350 lbs. bran, $3.65; 14 bags corn and meal, $14.70; 10 bags oats, $10.40 . .	28.75	
Aug. 12.	2 bags salt, $1.55; 5 bags meal, $6.20; 10 bags corn, $12.80	20.55	
Sept. 25.	20 bags meal, $24.30; 10 bags corn, $12.10; 50 bags oats, $53.50; 1,440 lbs. bran, $15.80 . . .	105.70	
			$352.56

J. F. WOODBURY & CO.

For shoeing horses from May 1 to September 15, 1890	$7.25

TEMPLE & FARRINGTON CO.

April	9.	For 6 shades, $3; 29 rolls paper, $21.75; 48 yds. border, $16.80	$41.55	
	29.	28 books for ex-Governor Smyth memorial prizes .	23.35	
May	2.	6 blackboard erasers, $2; 2 reams paper, $1.80; 3 boxes envelopes, $1.50 . .	5.30	
June	28.	2 packs torpedoes, 16c; 2 quires paper, $1 . .	1.16	
				$71.36

C. T. ALLEN.

April	12.	For 6 qts. oysters, $2.10; 6 lbs. crackers, 60c; 3 lbs. shad, 60c	$3.30	
May	10.	9 lbs. fish, $1.35; 5½ lbs. lobster, 66c . . .	2.01	
	14.	5¾ lbs. veal, 87c; 7¼ lbs. beef, $1.09; 6 oranges, 20c	2.16	
	31.	31½ lbs. fish, $3.66; 6¼ lbs. steak, $1.12 . . .	4.78	
June	10.	2½ lbs. fowl, 55c; 11 lbs. fish, $1.32 . . .	1.87	
	21.	20½ lbs. fish, $3.06; 1 bu. potatoes, 33c . . .	3.39	
	28.	30⅞ lbs. fish . . .	3.63	
July	5.	27⅛ lbs. fish, $5.45; 2 doz. eggs, 44c; 8⅛ lbs. lobster, $1.33	7.22	
	24.	8 lbs. fish, $1.20; 9⅜ lbs. steak, $1.56 . . .	2.76	
Aug.	1.	15 lbs. fish, $4.53; 13¼ lbs. steak, $2.69 . . .	7.22	
Sept.	11.	6¾ lbs. halibut, $1.12; 9¾ lbs. steak, $1.76 . .	2.88	
			$41.22	
		Credit, 2 bu. peas	2.50	
				$38.72

BARTON & CO.

April 15.	For 105 yds. denim, $14.45 ; 115 yds. shirting, $9.78 . .	$24.23	
29.	curtain rod, 20c ; brackets, 12c ; 8 yds. cotton plush, $2.40	2.72	
			$26.95

PETER GAINES & CO.

	For soft soap from March 27 to June 21, 1890 . . .	$71.44	
June 21.	1 box hard soap . . .	4.50	
		$75.94	
	Credit, bones and grease . . .	4.26	
			$71.68

R. E. WHEELER.

	For 1,327 lbs. beef in April and May	$99.52	
	Credit, 1 calf	10.50	
			$89.02

WILLIAM W. HUBBARD.

1889.			
Oct. 16.	For 4 window blinds, $3.20 ; 4 set blind trimmings, $1.03 .	$4.23	
	labor hanging and repairing blinds	4.50	
1890.			
Feb. 11.	planing and sawing chestnut plank and oak raves and staves	2.50	
			$11.23

KILLEY & WADLEIGH.

1889.			
April 5.	For 3 bits, 46c ; 12 stable pails, $2.50 ; ½ bu. peas, $1.70	$4.66	
14.	1 knife, $1.17 ; lb. iron washers, 10c ; 3 prs. butts and screws, 12c . .	1.39	

April	14.	For 4 sets carriage washers, 40c; 3 lbs. hinges, 24c; knife, 85c	$1.49
	28.	4 wrenches, 83c; 3 whips, 75c; 1 pr. butts and screws, 15c	1.73
May	5.	4½ lbs. hinges, 36c; file, 12c; shears, 60c; saw, $1.25	2.33
	22.	1 cask nails, $2.50; 2 lts. glass, 56c; putty, 2c; chain, 26c . . .	3.34
	24.	1 bolt, 30c; chain, 30c; 6 axes, $4.95; 6 ax-handles, 75c	6.30
June	3.	6 bolts, 25c; 4 lbs. powder, 60c; 100 ft. fuse, 40c; 2 hammer handles, 25c .	1.50
	5.	1 sponge, 30c; 2¼ lbs. wire, 63c; hammer, $1.20; gross rings, 30c . . .	2.43
	18.	2 doz. brooms, $4; 2 lbs. forcite, 60c; 8 caps, 16c; 50 ft. fuse, 25c . .	5.01
	30.	1 hay tedder, $35; horse rake, $24 . . .	59.00
1890.			
Jan.	10.	1 ox bow, 45c; 3 doz. bolts, 51c; 2 bell pulls, 40c; 2 cant-dogs, $2.50 . .	3.86
Mar.	5.	70 lbs. lath yarn, $8.40; polisher, 60c; 3 padlocks and hasps, 90c . .	9.90
April	19.	1 file, 15c; stable pail, 25c; hammer, 25c; gimlet, 10c	.75
		1 oiler, 20c; rope rings, 16c; 1 gal. oil and can, 70c .	1.06
June	18.	1 lb. paint, 35c; lb. lamp-black, 15c; 12 screws, 25c	.75

July	4.	For 1 hitch-rope, 20c; 2 razors, 80c; 18 lts. glass, 90c .	$1.90	
	18.	3 hay forks, $1.06; basket, 35c; 4 rakes, $1 . .	2.41	
	28.	1 knife, 40c; 1 paper glazier's points, 10c; 5½ oz. sponge, 99c . . .	1.49	
	29.	1 ball, 25c; bat, 30c; 12 fishlines, 25c; 3 doz. hooks, 24c . . .	1.04	
	31.	1¼ lbs. copper wire, 38c; lock, 45c; 12 brooms, $2	2.83	
Aug.	15.	2 brooms, 90c; pr. ox muzzles, 60c; 11 lts. glass, 80c	2.30	
Sept.	5.	6 scrub-brushes, $6.90; putty and points, 8c . .	6.98	
	8.	3 baskets, $1.55; 4 bolts, 24c	1.79	
	18.	2 casks nails . . .	6.10	
				$132.34

THOMAS A. LANE.

	For labor and stock repairing water-closets and pipes from January 13 to June 20, 1890	$23.88	
	repairs on boilers and engine from July 12 to August 6, 1890	82.70	
			$106.58

JAMES M. ROGERS.

May	26.	For 2,880 lbs. bedding	$14.40

PARTRIDGE BROS.

April	12.	For 10 bags meal, $9.50; 10 bags oats, $8.50; 750 lbs. bran and middlings, $8.30 .	$26.30	
May	17.	86 lbs. rye meal, $1.50; 3 bags corn, $2.85; 4 bags oats, $4.25 . . .	8.60	

June	27.	For 5 bags oats, $4.25; 15 bags corn, $14.25; 10 bags meal, $9.50 . . .	$28.00	
July	16.	600 lbs. bran, $6; 10 bags oats, $9; 6 bags meal, $6; 6 bags corn, $6 . .	27.00	
Aug.	26.	20 bags oats, $22.50; 10 bags meal, $13; 10 bags corn, $13; 1,360 lbs. bran, $17	65.50	
				$155.40

ALBE M. SMITH.

June 28. For 1,837 lbs. meadow hay . . . $5.51

C. E. COX.

For 1,442 lbs. beef from April 15 to June 27, 1890 . . . . . $107.22

PIKE & HEALD.

April	7.	For labor and stock repairing pipes	$2.80	
	24.	4 dishpans, $3.20; 3 pails, $1.26; 36 bread tins, $8.76; 6 basins, 74c .	13.96	
	28.	6 ladles, 52c; 2 dippers, 20c; 1 egg beater, 58c . .	1.30	
May	10.	1 scoop, 87c; 2 tunnels, 92c; sieve, $1.75; nails, 17c .	3.71	
June	21.	2 flue brushes, $2.50; 4 water pots, $2.60; 1 pan, 58c .	5.68	
		labor and stock repairing steam and water pipes in May and June . . .	42.13	
July	12.	1 closet plunger, $1.25; tea-kettle, $1; skimmer, 15c .	2.40	
Aug.	12.	2 pails, 84c; 2 dippers, 50c; repairing tinware, 25c .	1.59	
	26.	labor and stock repairing ram, etc. . . .	3.45	
				$77.02

E. M. SLAYTON.

April	5.	For 1 case eggs, $4.95 ; case evaporated apple, $6 ; 75 lbs. cheese, $9.75 . . .	$20.70	
May	5.	1 bbl. pork, $13.50 ; 2 cases eggs, $8.40 ; case evaporated apples, $6 . .	27.90	
June	6.	1 case eggs, $4.95 ; case evaporated apple, $6 ; bbl. pork, $14 . . .	24.95	
	14.	2 bags beans, $28.60 ; 50 lbs. lard, $3.50 ; case evaporated apple, $5 . .	37.10	
	30.	50 lbs. lard, $3.50 ; case eggs, $4.80 ; 12 bu. potatoes, $7.50 . . .	15.80	
July	11.	1 bbl. pork, $13.50 ; box evaporated apple, $5.50 .	19.00	
Aug.	12.	88 lbs. butter, $11.44 ; 4 bags beans, $21.25 ; 1 bbl. pork, $13	45.69	
Sept.	18.	50 lbs. lard, $3.50 ; 3 bbls. beans, $43.07 . . .	46.57	
	22.	117 lbs. butter, $14.04 ; 1 bbl. sweet potatoes, $3.25	17.29	
				$255.00

MANCHESTER ONE-PRICE CLOTHING CO.

June	25.	For 12 hats, $5 ; 1 pr. pants, $3 . .	$8.00

NEW ENGLAND TELEGRAPH AND TELEPHONE CO.

		For telephone rental and service from April 1 to September 30	$27.60

UNIVERSAL WEEDER CO.

June	30.	For 1 weeder	$6.00

FREDERICK C. DOW.

June	25.	For 1 pr. shoes, $1.50; 2 prs. kid boots, $3 . . .	$4.50	
Sept.	18.	126 prs. boots and shoes .	178.46	
				$182.96

REPUBLICAN PRESS ASSOCIATION.

April	22.	For advertising examination . . .		$3.25

J. HODGE.

Mar.	22.	For 1,113 ft. birch floor, $61.22; window blind and fixtures, 95c		$62.17

SANBORN CARRIAGE CO.

Jan.	1.	For repairing buggy . . .	$10.50	
	2.	check straps, shackle bolt, front leathers, whiffletree straps	1.35	
				$11.85

R. D. GAY.

May	1.	For 78½ rolls paper, $45.57; 24 yds. oil-cloth, $1.68		$47.25

L. T. MEADE.

		For "Boston Daily Journal" from April 1 to October 1, 1890	$3.00	
Sept.	1.	2 boxes paper, 20c; rubber bands, 14c . . .	.34	
				$3.34

UNION PUBLISHING CO.

		For "Daily Union" from April 1 to July 1, 1890 . .	$1.50	
April	22.	advertising examination .	24.50	
				$26.00

J. H. WIGGIN & CO.

April	7.	For 330 lbs. sugar, $23.93 ; 22 lbs. currants, $1.94 ; 46 lbs. crackers, $2.53 . .	$28.40
	24.	319 lbs. y. c. sugar, $21.43 ; 1 lb. nutmeg, 90c ; 1 doz. gelatine, $1.65 . .	23.98
		1 bottle vanilla, $1.75 ; 6 lbs. cream tartar, $2.10 ; 41 lbs. crackers, $2.25 . .	6.10
	26.	1 doz. yeast, 24c ; box salt, 20c ; 22 lbs. coffee, $8.48 ; bag salt, 85c . . .	9.77
May	8.	62 bbls. flour, $350.30 ; box soap, $4.50 ; 3 lbs. saltpeter, 45c . . .	355.25
	16.	2 bags salt, $1.60 ; 6 lbs. soda, 18c ; 51 lbs. coffee, $10.89	12.67
June	6.	2 bbls. sugar, $47.65 ; baking powder, 42c ; 20 lbs. currants, $1.70 . . .	49.77
	23.	50 lbs. coffee, $9.70 ; box raisins, $2.25 ; 6 bean pots, $1.50	13.45
	30.	12 lbs. pepper, $1.80 ; 30 lbs. tea, $6 ; 42 lbs. crackers, $2.31 ; 10 lbs. sugar, 90c	11.01
July	5.	4 lbs. insect powder, $1.70 ; 44 lbs. crackers, $2.42 ; 40 lbs. cod, $3.40 ; 10 lbs. soda, 50c . . .	8.02
	12.	270 lbs. coffee, $24.40 ; 5 bbls. flour, $32.50 ; vanilla, $2.50 ; 10 lbs. tapioca, 80c	60.20
	23.	20 lbs. coffee, $7.40 ; lb. nutmegs, 90c ; bbl. sugar, $24.83 ; 2 bags salt, $1.30	34.43

Aug.	11.	For 2 yeast cakes, 4c; 6 lbs. cr. tartar, $2.10; 45 lbs. lard, $3.60; matches, 15c .	$5.89	
	18.	88 lbs. soap, $4; doz. gelatine, $1.65; 43½ lbs. crackers, $2.37 . .	8.02	
	26.	40 lbs. starch, $5; 59 doz. clothes pins, $1; 5 bbls. flour, $32.50 . . .	35.50	
Sept.	4.	29¼ lbs. cod, $3.34; 20 lbs. coffee, $7.20; 2 bbls. sugar, $45.15 . . .	55.69	
	22.	106 gals. molasses, $39.22; 60 lbs. tea, $12; 20 lbs. coffee, $7.20 . . .	58.42	
	25.	2 bags salt, $1.30; 11 lbs. raisins, $1.75 . . .	3.05	
				$779.62

LEWIS K. MEAD.

June	4.	For cherry pectoral, $85c; 2 prescriptions, 90c . .	$1.75	
	29.	1 prescription, 30c; ointment, 20c; newspapers, 10c	.60	
Sept.	21.	1 prescription, 65c; newspaper, 5c	.70	
				$3.05

GILMAN CLOUGH.

June	30.	For 65⅜ cords pine wood . .	$147.09	
Aug.	26.	1,000 boards, $11; 3 cart tongues, $3.75 . .	14.75	
				$161.84

PLUMER & HOLTON.

Feb.	22.	For 2 prs. gloves, 75c; 8 boxes collars, 80c	$1.55

FLEISCHMANN & CO.

	For 52 lbs. yeast from April 1 to October 1, 1890	$18.20

CARL E. YORK.

April	8.	For 11¾ lbs. sulphur, 94c; 1 bag salt, 75c; 18 oranges, 75c	$2.44	
May	2.	2 bbls. sugar . . .	42.79	
June	10.	6 lbs. soda, 48c; 4 lbs. steak, 64c; 2 pineapples, 40c .	1.52	
	25.	1 bbl. salt, $3.25; 12 lemons, 18c; matches, 16c . .	3.59	
July	4.	100 lbs. salt, $1.25; 12 cucumbers, 60c; melon, 50c	2.35	
	5.	5 lbs. steak, $1.25; 10⅝ lbs. fowl, $1.87; cherries, 20c	3.32	
	8.	335 lbs. sugar, $23.94; 2 pineapples, 36c; 6 cucumbers, 30; melon, 35c .	24.95	
	14.	20¾ lbs. fowl, $3.75; 3 doz. lemons, $1.05; melon, 40c	5.20	
	26.	11⅜ lbs. beef, $2.53; 12 lemons, 35c; pail, 15c; melon, 40c . . .	3.43	
Aug.	16.	3 melons, $1.45; 8⅛ lbs. fowl, $1.63; berries, 84c	3.92	
	26.	46 gals. vinegar, $7.36; 17 lbs. coffee, $6.12 . .	13.48	
	27.	2 doz. lemons, 80c; melon, 35c; bananas, $1 . .	2.15	
Sept.	6.	8¼ lbs. chicken, $1.65; canned meats, $1.20 .	2.85	
	18.	10½ lbs. fowl, $1.89; 3 lbs. lamb, 48c; bag salt, 70c; basket grapes, 65c . .	3.72	
				$115.71

EDWARD C. SMITH & CO.

April	24.	For 1 gal. witch hazel, 90c; cough medicine, 75c; liniment, 50c . . .	$2.15	
May	26.	extract beef, iron, and wine, 75c; linseed meal, 25c .	1.00	

June	26.	For 4 prescriptions . . .	$1.10	
July	8.	4 oz. checkerberry, 15c; castoria, 30c; turpentine, 15c	.60	
Aug.	4.	1 gal. witch hazel, 90c; gal. alcohol, $2.50; Hood's sarsaparilla, $1.50 . .	4.90	
	6.	1 bottle acid phosphate, 75c; zinc ointment, 10c . .	.85	
Sept.	3.	niter, 30c; Ayer's sarsaparilla, 75c; Seidlitz powders, 50c . . .	1.55	
	20.	1 box plasters, $2.40; Fellows' syrup, $1.15 . .	3.55	
	22.	2 prescriptions, $1.10; flaxseed meal, 50c . .	1.60	
				$17.30

N. DESCOTEAU.

For repairing wagons, chains, hoes, crowbars, ox-yokes, from April 8 to June 10, 1890	$21.50	
blacksmith repairs on wagons and carriages to August 29	30.95	
		$52.45

GEORGE W. CHAPMAN.

For shoeing horses from April 12 to September 25, 1890	$61.02

MANCHESTER HARDWARE CO.

April	3.	For B. B. caps, 40c; padlock, 30c; 4 hasps, 17c; pr. ox tie chains, 50c . . .	$1.37	
	28.	100 lbs. white lead, $7.50; 26½ lbs. zinc, $1.85; 100 lbs. phosphate, $1.75 .	11.10	
	30.	50 ft. hose, $4.50; 2 sprinklers, $1.40; hose stand, 90c; sink, $1.75 . .	8.55	

May	17.	For 1 halter, 20c; scythe, 75c; rifle and stone, 20c; bolt, 35c; ¼ lb. staples, 5c .	$1.55	
	27.	1 lock, 20c; 4 lts. glass, 56c; 76 bolts, $1.14; 5 prs. hinges, 48c . . .	2.38	
June	24.	2 gross screws, 58c; 2 hammers, 70c; 9 rakes, $1.69	2.97	
	26.	3 pr. butts, 23c; 2½ lbs. rope, 45c; 17 ft. w. cloth, 38c; 1 snap hook, 10c . .	1.16	
	27.	1 set door corners, 15c; 12 yds. brass chain, 63c .	.78	
	30.	6 lantern globes, 60c; 6 files, 75c; oil can, 40c . .	1.75	
July	1.	2 snaths, $1.30; 112½ ft. netting, 84c; 2 bell turns, 10c	2.24	
Aug.	20.	1 wrench, 35c; 8 lbs. steel wedges, 96c; rope halter, 15c	1.46	
Sept.	3.	1 lt. glass, 20c; 6 baskets, $2.55; 6 bolts, 14c . .	2.89	
	9.	4 potato diggers, $1.50; lock, 35c; 133 lbs. grass seed, $5.82	7.67	
	26.	100 lbs. tarred paper, $2.75; 14 lbs. zinc, $1.02; pr. butts and screws, 5c . .	3.82	
				$49.69

S. P. PIKE & CO.

April	12.	For 20 lbs. ham, $2.20; 2 cases eggs, $8.10; 108 lbs. butter, $13.35 . . .	$23.65	
	26.	119 lbs. ham, $11.90; 315 lbs. beef, $22.05 . .	33.95	
June	4.	2 pineapples, 25c; 131 lbs. butter, $15.72 . . .	15.97	

June	30.	For 82 lbs. butter, $11.48; 25 lbs. lard, $1.63 . . .	$13.11	
July	3.	boxes, $1; 14 lbs. steak, $2.25; melon, 55c . .	3.75	
	15.	2 doz. eggs, 40c; 8 lbs. steak, $1.06; onions, 50c . .	1.96	
	18.	55 lbs. butter, $7.70; 3 tubs lard, $1.95; bbl. squash, $1.25	10.90	
	25.	50 lbs. butter, $7.07; 2 melons, 90c; 25 lbs. lard, $1.63	9.60	
	30.	51 lbs. butter, $7.14; 2 melons, 70c	7.84	
Aug.	25.	2 tubs lard, $1.10; 118 lbs. butter, $18.42 . . .	19.52	
Sept.	5.	38 lbs. fish, $1.14; 30 lbs. butter, $4.48; 7½ lbs. lamb, $1.20 . . .	6.82	
	17.	12 lbs. steak, $1.50; 32 lbs. butter, $5.12 . . .	6.62	
			$153.69	
		Credit, 546 cabbage	16.16	
				$137.53

JOHN B. VARICK CO.

April	4.	For vegetable seeds, $2.32; 2 doz. ox balls, 79c; 39 lbs. zinc, $2.73	$5.75	
		7 brushes, $2.75; 6 curry-combs, 88c; chamois skin, $1; sponge, 40c . .	5.03	
	11.	3 gals. turpentine, $1.80; 3 rakes, $1.50; 4 prs. butts, 16c; 5 gross screws, $1.05	4.51	
	12.	10 lbs. whitewashing, 30c; 5 prs. hinges, $1.04; 12 lbs. zinc, 84c . . .	2.18	

April	16.	For 1½ gals. asphaltum, $1.25; 2 lbs. paint, $3; cask nails, $3.40	$7.65
	17.	1 file, 15c; broom, 50c; 9 lts. glass, 54c; 6 brushes and combs, $1.07 . .	2.26
	21.	2 halters, $1.30; goad stick lash, 30c; 1 gal. paint, $1.50; 12 hoes, $3.25 .	6.35
	22.	100 lbs. Phœnix lead, $7.50; 2 boxes glass, $5.50; 1 pa. glazier's points, 6c . .	13.06
	24.	5 lbs. wall finish, 40c; 1 lb. Prus. blue, 32c; 1 plane and saw handle, 18c .	.90
		2 gals. Jap., $1.60; 1 gross knives, $8; 2 doz. plated knives, $3 . . .	12.60
	25.	1 pt. varnish and can, 48c; 12 scrub brushes, $1.25; 3 bits, 68c . . .	2.41
	29.	74 bolts, $1.18; 1 lb. brads, 12c; 18 balls, $15.67; 6 bats, $1.75 . . .	18.72
May	7.	1 pump, $3; 2 plow cutters, $1.80; lawn mower, $8 .	12.80
	26.	6 knobs and locks, 86c; harrow, $14; 6 scrub brushes, $2.25	17.11
June	2.	3 parts to lawn mower, 30c; 3 latches, 15c; rope halter, 20c	.65
	21.	2 clothes baskets, $1.50; 2 pails, 30c; can harness oil, 35c	2.15
	28.	50 lbs. bolts, 88c; 2 scythe stones and rifles, 36c .	1.24

July	1.	For 4 hay forks, $1.20 ; 2 scythes, $1.40 ; 2 oilers, 40c ; croquet set, $1.10 . .	$4.10	
	3.	1 oil can, 10c ; 2 bolts, 8c ; 25 lbs. rope, $3.50 ; 10 lbs. Paris green, $2 . .	5.68	
	14.	1 door bolt, 25c ; hasp and staple, 6c ; padlock, 25c ; 2 forks, 50c . . .	1.06	
	15.	6 rakes, $1.50 ; 6 bats, $1.25 ; sponge, 30c ; whip, 25c ; quire sand-paper, 20c .	3.50	
	23.	2 hay forks, 75c ; 4½ lbs. rope, $1.72 ; 12 lts. glass, 96c	2.43	
Aug.	4.	1 ton land plaster, 8c ; pail cement, 30c ; 6 balls, $4.50	12.80	
	5.	1 oil faucet, 65c ; padlock, 65c ; hasp and staple, 5c .	1.35	
	14.	12 brooms, $1.62 ; 1 pr. shears, 50c ; pr. clippers, $3.25	5.37	
	30.	1 ox goad, 20c ; washers, 37c ; rubber packing, 5c .	.62	
Sept.	1.	2 plow handles, $1.10 ; plow point, 80c ; 2 set casters, $1	2.90	
	13.	3 spades, $2.12 ; 6 pails, 75c ; coal hod, 50c ; 2 pr. butts, 16c	3.53	
	18.	2 kegs nails, $5.50 ; 6 lanterns, $3.50 ; lamp, $2.75	11.75	
	29.	2 prs. hangers, $1.60 ; 28 ft. track, $1.12 ; 7 lbs. hinges, 35c	3.07	
		2 thumb latches, 30c ; 10 lbs. nails, 40c . . .	.70	
				$174.23

CONCORD RAILROAD CORPORATION.

	For freight from March 14 to September 29, 1890		$60.41

E. S. NEWTON.

April 30.	For 50 lbs. fish, $3.87 ; 6½ gals. oysters, $8.85 ; 3 lbs. crackers, 30c . . .	$13.02	
	156¼ lbs. fish in May . .	10.71	
	96½ lbs. fish in June . .	7.05	
	134 lbs. fish in July . .	9.68	
	117 lbs. fish in August . .	8.30	
	102 lbs. fish in September .	6.43	
			$55.19

S. C. FORSAITH MACHINE CO.

May 29.	For repairs on engine . .	$3.80	
June 23.	3 pulleys, $6.12 ; 6 ft. shafting, $3.18 ; labor, 30c .	9.60	
	120 ft. spruce lumber, $2.04 ; 4,432 shingles, $15.34 ; labor, $4.40 . . .	21.78	
July 30.	1,000 ft. spruce boards, $16 ; 26 lbs. boiler plate, $1.30 ; pulley, 35c . . .	17.65	
Sept. 30.	6 water glasses, $1.50 ; 12 rubbers, 36c ; labor on boiler, $10.95 . . .	12.81	
			$65.64

MANCHESTER STOCKING CO.

June 18.	For 11 doz. hose . . .	$22.00	
Sept. 14.	18 doz. hose . . .	36.00	
30.	1 Huse topping machine .	35.00	
			$93.00

WILSON, LARRABEE & CO.

Mar. 11.	For 12 prs. blankets, $10.20 ; 2 doz. shirts, $9.50		$19.70

WARREN HARVEY.

May	1.	For 45¼ cords wood		$147.06

STANDARD CLOTHING CO.

July	2.	For 5 suits, $41 ; 45 coats and 10 vests, $16.75		$57.75

SAWTELLE & PRATT.

July	2.	For 1 box lemons, $5 ; ½ bu. peanuts, $1.25 ; 60 lbs. nuts, $6.25		$12.50

ELBRIDGE HILL.

May	1.	For 98 lbs. veal, $9.80 ; 4,000 ft. pine and chestnut timber, $48	$57.80	
	21.	120 lbs. veal, $12 ; 15 cords wood, $37.50 . . .	49.50	
July	1.	7 chestnut sleepers . .	2.45	
Aug.	28.	4 bbls. apples, $6 ; 1½ bu. pears, $5	11.00	
Sept.	20.	100 lbs. veal, $9 ; 4 bbls. apples, $12	21.00	
	29.	7 bbls. apples . . .	17.50	
				$159.25

P. BERUBE.

July	4.	For fireworks		$2.95

PHILIP RILEY.

July	4.	For 20 doz. cookies, $1.60 ; 20 doz. buns, $1.60		$3.20

EDWARD P. PAIGE.

July	9.	For 1 pr. oxen		$142.00

JAMES H. HASSETT & CO.

July	12.	For 1 carriage, $130 ; covers, $1.20 . .		$131.20

WILLIAM B. ABBOTT.

July	22.	For 2 days' labor painting		$3.00

J. L. FOGG.

July	30.	For ½ ton Pacific guano		$18.00

JOHN B. CLARKE.

April	29.	For advertising examination, $11.97; printing 500 programs, $2 . . .	$13.97	
July	7.	printing 600 bill heads .	2.75	
				$16.72

W. F. DREW.

Aug.	4.	For 4 days' labor in cookroom . . .		$3.90

Z. LAFOE.

Sept.	30.	For cutting 153 cords wood, $137; logs, $25	30,000	$162.00

S. C. AUSTIN & BROTHER.

Aug.	13.	For repairs on lightning-rods . . .		$7.00

H. G. BOYNTON.

Aug.	7.	For pasturing 3 cows from May 20 to August 7, 1890		$8.00

THADDEUS RICHARDS.

Aug.	15.	For 205 lbs. beef		$9.23

NEW HAMPSHIRE DEMOCRATIC PRESS CO.

April	22.	For advertising examination . . .		$2.00

R. M. ROLLINS & SON.

July	7.	For 5 tedder forks, $2.15; pitman rod, $1.50 . . .	$3.65	
		hay carrier and pulleys, $9; whiffletree iron, 20c .	9.20	
				$12.85

MANCHESTER BEEF CO.

		For 1,368 lbs. beef from July 9 to August 25, 1890		$99.46

WESTERN UNION TELEGRAPH CO.

Sept.	2.	For telegraphing to date		$2.10

JAMES E. STONE.

Sept.	5.	For 19 boxes blackberries		$1.52

THE GLOBE NEWSPAPER CO.

Sept.	10.	For advertising		$5.90

E. WINGET.

Sept.	19.	For 8⅝ lbs. chicken		$1.72

A. L. BURNHAM.

Sept.	20.	For 3 baskets peaches		$6.50

EAMES BROS.

April	13.	For 3 prescriptions, 95c; 2 oz. tablets, 10c	$1.05	
June	26.	4 oz. sweet oil, 15c; ½ doz. corks, 13c	.28	
				$1.33

JAMES B. DAY.

Sept.	1.	For 1½ tons chestnut coal .	$9.25	
	25.	2,500 lbs. chestnut coal .	8.75	
				$18.00

E. T. JAMES.

		For hitching in and baiting horses from April 5 to September 30, 1890		$5.00

F. CLASSE (FOREMAN FOR FRENCHMEN).

		For labor of 7 Frenchmen haying two weeks		$156.37

J. C. RAY.

Sept.	23.	For pasturing 2 heifers 20 weeks, $8 ; 2 cows 10½ weeks, $7.86		$15.86

C. E. WALKER & CO.

July	28.	For 33,800 lbs. coal . . .	$75.45	
Aug.	16.	46,120 lbs. coal . . .	92.65	
				$168.10

NEW HAMPSHIRE FIRE INSURANCE CO.

Sept.	29.	For insurance on buildings . . .		$97.50

G. D. PARKER.

Sept.	8.	For mending 2 prs. shoes		$1.50

J. R. FERSON.

1889.				
Dec.	11.	For 1 clevis, $2 ; gripe, 50c ; bolts, $1.25 ; repairs on wagon and cart poles, $5 .	$8.75	
1890.				
Jan.	30.	repairing sleds, $7.60 ; repairs on express and wood wagons, $6.30 . .	13.90	
July	11.	repairing hay racks, carts, wagons, and chains . .	52.30	
				$74.95

RAY BROOK GARDEN CO.

For vegetable and garden seeds, shrubs, and plants in 1889 and 1890	$88.61	
Credit, for hay	46.15	
		$42.46

CHARLES E. LORD.

Mar.	21.	For mason work, $3.50 ; mortar, $2.75 .		$6.25

D. S. KIMBALL.

April	26.	For 1 halter, 25c ; rope tie, 18c ; collar, $4.50		$4.93

HENRY K. BARNES.

Aug. 11.	For 300 ft. hose, $32.40; 6 sets couplings, $7.50; 4 nozzles, $6		$45.90

CHARLES H. KIMBALL.

June 28.	For music, 20c; harmonicas, $1.04; accordion, $1.50		$2.74

C. G. PAGE.

Aug. 30.	For 15½ lbs. fowl		$2.33

DUNMORE & MCQUARRY.

Sept. 27.	For 3 stone jars, $1.87; 2 doz. glass jars, $3		$4.87

FITCHBURG STEAM ENGINE CO.

July 17.	For 1 eccentric		$10.00

E. R. COBURN & CO.

June 6.	For 1 speaker, 10c; 1 gross pens, 75c; 2 bottles ink, $1 .	$1.85	
	"Harper's Magazine," "Golden Days," "Ladies' Home Journal," from January 1 to October 1, 1890	5.70	
			$7.55

C. H. HUTCHINSON.

Aug. 8.	For 28 boiler grates		$33.30

JAMES BROS.

	For baiting horses from January 1 to July 1, 1890		$4.00

HILL & CO. EXPRESS.

	For boxes and bundles, etc., from June 2 to July 3, 1890		$1.05

LIST OF INCIDENTAL EXPENSES FROM APRIL 1, 1889, TO APRIL 1, 1890.

1889.			
April	8.	Stencil	$0.75
	10.	Express	.55
	11.	Expenses to Boston	5.00
	20.	J. E. Steele, for lemon extract	.15
		Zithern	2.00
	22.	Hinge for organ	.20
May	2.	Expenses of Nita Luce at P. O. Woodman's	17.25
	11.	Talmage's "Pathway of Life"	3.50
	17.	John Wallace, for 12 doz. eggs	1.08
		Perry Mason & Co., for 2 copies "Youth's Companion"	3.12
	23.	Expenses to South Weare	1.75
		Repairs on carriage pole	.50
June	1.	Expenses to Ashburnham	4.10
	5.	W. E. Greeley, for repairing harness	.35
		Day & Emerson, for "Analecta" 1 year	1.00
	17.	A. S. Clark, for book	1.00
		Inmates' car fares during quarter	23.15
		Postage stamps during quarter	12.00
		Extra work and money during quarter	5.22
July	1.	Alonzo Elliot, for use of steamboat	5.50
	8.	Splicing ropes	.85
	9.	Car fare to Concord	.75
		Tickets for boys to Barnum's	8.00
	13.	Expenses to Boston	4.70
	17.	Expenses to Portsmouth and Boston	5.75
	27.	Maynard Hadley, for apples	.50
	30.	Expenses arresting boys	5.00
Aug.	7.	Expenses to Deering for cattle	2.00
		Moore & Campbell, for shoeing horse	.75
	8.	Expenses to Concord	1.50
	10.	Expenses to Hillsborough	2.25
		A. Bates, for arresting Fletcher	5.00
	12.	Expenses to Goffstown and Derry	1.65

Aug.	16.	Expenses to Boston	$4.60
	19.	Expenses to Concord	1.50
		Lamp	1.00
	22.	Expenses getting oxen	2.25
	26.	H. J. Rhodes, for "Herald of Gospel Liberty"	1.50
		Bottle of blacking	.35
	31.	Expenses to state fair, entries, etc.	12.00
Sept.	2.	William J. Freeman, for use of barge to Dunbarton	1.00
	16.	John Truesdale & Son, for valise	1.25
	17.	Mr. Orcutt, for use of boats	.75
	20.	Expenses to Boston	3.50
	23.	Rev. M. V. B. Knox, for 4 tickets to course of lectures	4.00
	26.	W. W. Skillen, for shoeing horse	.75
		Expenses to pasture	1.50
		Inmates' car fares during quarter	24.80
		Extra work and money during quarter	5.50
		Postage stamps during quarter	11.00
Oct.	9.	Expenses to Boston	4.50
	19.	Expenses to Lowell and Fitchburg	6.09
	21.	Expenses to Peterborough and Rindge	7.80
	22.	Expenses to Bradford for Tobin	6.83
	23.	Expenses to Laconia for boys	5.56
	24.	Expenses getting cattle from Hillsborough and Deering	6.25
		Amesden Barnard, for 1 peck chestnuts	1.00
	29.	Expenses to Townsend	6.93
		Mr. Sloan, for peck of chestnuts	.90
		R. W. Lamprey, for filing saws	.50
Nov.	5.	Expenses to Concord	1.00
	12.	Expenses to Concord	.76
	15.	Cutting boy's hair	.25
	29.	Expenses to Boston	3.25
Dec.	19.	J. H. Cram, for filing saws	.75
	31.	New Hampshire Agricultural Society, admission boys to fair	18.75
		James Bros., for baiting horses	.50

		Inmates' car fares during quarter	$9.60
		Extra work and money during quarter	7.15
		Postage stamps during quarter	12.86
1890.			
Jan.	3.	Mr. Daniels, for making key	.25
	29.	Expenses to Boston	3.80
Feb.	1.	Shoeing and baiting horse	1.60
		Union Publishing Co., for advertising keys	.75
		Tickets for boys to Bartholomew's show	2.25
		B. Lord, "The Weekly Times" 3 months	.25
	24.	George Scarbo, for labor	2.25
Mar.	4.	Expenses to Portsmouth and Boston	5.25
	8.	James Orrill, for 2 razors	1.00
	17.	Tickets for boys to orphans' fair	1.00
	20.	Henry Kelley, for bbl. apples	2.50
		"Osgood's Meat Juice Press"	1.75
	27.	Expenses to Rochester with Joseph Gagner's body	6.75
		Moore & Preston, for measuring manure	.20
		Inmates' car fares during quarter	9.00
		Extra work and money during quarter	8.00
		Postage stamps during quarter	12.25

SALARIES AND WAGES.

Paid superintendent and treasurer	$1,400.00
matron	600.00
principal teacher	340.00
assistant teachers	249.50
farmer	450.00
overseer in chair shop	349.00
overseer in boys' cookroom	365.00
overseer in sewing-room	208.00
overseer in laundry	161.00
housekeeper	208.00
watchman	308.00
assistant farmer	153.23
book-keeper	100.00
	$4,891.73

LIST OF INCIDENTAL EXPENSES FROM APRIL 1 TO OCTOBER 1, 1890.

April	2.	Expenses to Boston	$3.95
	7.	For arresting Lamper	5.00
	14.	John Church Co., for singing-books	1.20
	22.	1 box potash	.20
May	2.	Newspapers	1.00
June	20.	Expenses getting cattle to pasture	2.50
		Horseshoeing	.25
	30.	Cabbage plants	2.00
		Inmates' car fares during quarter	19.23
		Extra work and money during quarter	6.85
		Postage stamps during quarter	12.50
July	2.	Expenses to Boston	3.30
	4.	A. A. Aldrich, for filing saws	.30
	12.	Expenses to Dover and Merrimack	4.75
	29.	Expenses for farm boys' picnic	2.15
	30.	Expenses to Boston	4.60
Aug.	2.	Dr. J. Alexander, for veterinary services	1.50
		McLane sisters, for concert	3.00
		Expenses returning boys	5.25
		Dentist, for extracting teeth	.50
	8.	Expenses to Peterborough for boy	9.50
		Expenses returning Clough	2.75
		Telegram	.75
	18.	12 tickets for boys to Forepaugh's	6.00
	23.	Expenses to Boston	3.60
		Basket of grapes	.75
	26.	Mr. Niel, for basket of peaches	1.50
	27.	Expenses to Weare for oxen	1.40
Sept.	3.	Expenses after cattle	2.00
	8.	Rev. M. V. B. Knox, for 4 tickets to lectures	4.00
	11.	Expenses to Boston	4.60
	16.	Horse baiting	.50
	18.	Mr. Eastman, for basket peaches	1.00
	23.	Expenses to Hillsborough about cattle	6.50
	27.	F. Classe, for labor	1.00

Sept. 29.	W. P. Goodman, for 2 boxes slate pencils	$0.60
	Oliver Bailey, for appraising cattle . .	2.00
	Inmates' car fares during quarter . .	7.05
	Extra work and money during quarter .	6.70
	Postage stamps during quarter . . .	6.00
		$148.23

SALARIES AND WAGES FROM APRIL 1 TO OCTOBER 1, 1890.

Paid superintendent and treasurer	$700.00
matron	300.00
principal teacher	135.00
assistant teacher	44.00
farmer	258.00
overseer in chair shop	140.00
overseer in boys' cookroom	69.00
overseer in sewing-room	104.00
overseer in laundry	100.00
housekeeper	93.00
watchman	127.00
assistant farmers	113.00
book-keeper	50.00
	$2,233.00

CONDENSED FINANCIAL STATEMENT OF THE TREASURER.

Cash balance in hands of treasurer, April 1, 1889 . $1,614.72

CASH RECEIVED.

From state treasurer	$6,000.00
For board	8,566.60
chairwork	1,283.15
labor in hosiery	1,825.05

From state treasurer, appropriation for bedsteads, mattresses, building purposes, and water	$2,000.00	
sale of hay and vegetables	808.85	
James McKean Wilkins fund	275.00	
Moody Kent fund	90.00	
Miss Louise Penhallow fund	45.00	
Ex-Gov. Frederick Smyth, in memory of Mrs. Emily Smyth	41.75	
Mrs. Nathaniel White, for books	15.00	
various sources	471.00	
		$21,421.40
		$23,036.12

CASH PAID.

For ordinary expenses	$11,634.51	
salaries	4,891.73	
bedsteads, mattresses, building, and water	2,144.16	
improvements	755.00	
insurance	105.00	
library books from Miss Louise Penhallow fund	45.00	
Ex-Gov. Frederick Smyth memorial prizes	20.50	
		$19,595.90
Cash balance April 1, 1890		$3,440.22

BILLS RECEIVABLE.

For board	$2,118.00	
chairwork	253.00	
interest	246.00	
From various sources	90.00	
		$2,707.00
		$6,147.22
Bills payable		200.00
Available balance April 1, 1890		$5,947.22

Cash balance in hands of treasurer April 1, 1890 .		$3,440.22

CASH RECEIVED.

From state treasurer	$3,000.00	
For board	3,968.56	
From Manchester Stocking Co., for labor	1,833.30	
James McKean Wilkins fund .	160.00	
sale of hay, beef, and vegetables .	252.37	
various sources	205.27	
		$9,419.50
		$12,859.72

CASH PAID.

For ordinary expenses	$6,845.34	
salaries	2,233.00	
improvements	600.00	
insurance	97.50	
Ex-Gov. Frederick Smyth memorial prizes	23.00	
		$9,798.84
Cash balance October 1, 1890 . . .		$3,060.88

BILLS RECEIVABLE.

For board	$2,230.00	
chairwork	500.00	
labor on highway	200.00	
interest on Samuel Hall note . .	290.00	
From various sources	50.00	
		$3,270.00
		$6,330.88
Bills payable		150.00
Available balance October 1, 1890 . .		$6,180.88

J. C. RAY, *Treasurer.*

REPORT OF SUPERINTENDENT.

But little of interest can be added to the foregoing tables except to report substantially the general remarks of previous years. In the synopsis of the educational and financial condition submitted, you will gather a general and correct idea of the standing of the institution.

For the past year we have not been as exempt from sickness as usual. In the early part of the winter a large number of the children were prostrated by the prevailing disease, "la grippe," requiring the attendance of a physician for the first time for more than two years. Several of them were seriously ill for a long time, interfering materially with the advancement of the classes in school, as well as the accomplishment of the usual amount of work in the different departments of labor. One boy, Joseph Gagner, of Rochester, who had been with us only a few months, was taken with the disease, which developed into pneumonia and finally into quick consumption, of which he died March 26, — this being the first death among the inmates for over six years. Excepting this sickness we have been abundantly prospered.

The children have made good progress in their studies and passed a creditable examination at the annual exhibition, which was attended by many hundred people from different parts of the State ; for want of room many were unable to gain admittance.

The chair industry for the past year has been almost an entire failure, as prices for seating have been so extremely low. Work in the hosiery department has been quite good and satisfactory prices have been obtained. Boys who have been taught this business at the school have been enabled to obtain constant work in this city and neighboring towns at fair wages. The girls are taught general housework, as well as instructed in making their own and the boys' clothing. Some of them are employed in the hosiery department, when not in school.

As usual, the farm has produced excellent crops of all kinds, which has materially aided us in supporting our large family.

Buildings are all in fair and comfortable condition, and well insured. The insurance, which is quite a tax, is taken from our usual income. The barns and tenement house have recently been thoroughly painted.

The last Legislature kindly voted an appropriation of two thousand dollars, one thousand dollars to be expended for bedsteads and mattresses. With this sum we purchased one hundred and twenty iron bedsteads and woven wire mattresses, and one hundred and twenty cotton felt mattresses. The other one thousand dollars was used for increased water privilege, which was much needed, and for an addition to our hosiery mill. In making the improvements we exceeded the appropriation several hundred dollars, but have been enabled to pay the balance from our regular receipts. The children have enjoyed the comfort of the new beds exceedingly.

As usual, our religious services Sunday have been conducted by the Women's Christian Temperance Union, for which we pay them annually the sum of one hundred and fifty dollars. The different clergymen of the city kindly tender their services gratuitously for the benefit of this society. May their labors in this work be greatly blessed. The Rev. Fathers Timon, Mackey, McHugh, and others have instructed the Catholic children in this faith with beneficial results.

We renew our thanks to the publishers of the following named papers for their kindness and generosity in furnishing the children gratuitously with so much valuable reading matter: "Dover Enquirer," "Cheshire Republican," "New Hampshire People and Patriot," "Portsmouth Journal," "Merrimack Journal," "Morning Star," "Our Dumb Animals," "Howard Times," "The Advance," "The Lyman School Enterprise," and twenty copies of "Every Other Saturday."

Mrs. John B. Clarke kindly contributed for the use of the children a large bundle of books and magazines, which have been read with much interest and profit.

Mrs. Nathaniel White, of Concord, again kindly renewed her donation for the purchase of books for the library, and remembered the children at Christmas time by sending them nice boxes of oranges and candy.

Miss Louise Penhallow's legacy of one thousand dollars is kept in the savings bank, the interest, as provided in the will, being expended annually in enlarging our library.

The Moody Kent and the James McKean Wilkins funds are

well invested and the income is expended according to the provision of their wills.

Ex-Gov. Frederick Smyth's fund is deposited in the bank, the yearly interest of which has been expended for prize books for deserving children at the annual examination of the school. This noble gift has been greatly appreciated by the boys and girls, and will be kindly remembered.

We sincerely thank and highly appreciate the faithful services of teachers and officers in the work in which we have been engaged.

To the honorable board of trustees we express our obligations. Your hearty co-operation in the work in which we have been engaged for the past sixteen years has done much to lighten the cares and anxieties incident to our position.

Notwithstanding the general prosperity of the institution, the past year has been in some respects one of misfortune and exceedingly trying to the superintendent. We have had much trouble and loss with our herd of cattle, which was one of the finest and most valuable in the State.

In July last tuberculosis appeared in it, progressing and spreading until it enveloped nearly the whole herd, compelling the destruction of over forty head to arrest the contagion.

The history of the disease has been substantially as follows:

Two years ago I purchased a pair of large oxen at Bradford, apparently sound cattle and in fair flesh. One ox, after we got him home, coughed considerably, but only when at work; this cough we attributed at first to the bow being a little small, and changed it for a larger one, but his cough continued. We thought it nothing serious, as he fed and worked well and held his flesh through the winter. The following spring he was turned to pasture, and he came home in about the same condition as when he went away. Last winter he was worked rather moderately, still feeding fairly; but we noticed his cough rather grew upon him and he lost flesh. Last June he was turned to pasture in Hillsborough in the care of Mr. Murdo, and in July I received a letter from him saying this ox was "running down" very fast, and that he thought he would not live. I went immediately to see him and found him very much emaciated and feeble, and instructed Mr. Murdo to kill him at once and bury him. He

was found to be much diseased. In August I received another letter from Mr. Murdo informing me that one of another pair of very nice five-year-old oxen, weighing about four thousand pounds and belonging to the State, was also sick.

It occurred to me at once that the trouble was of a serious character and possibly contagious; I immediately had him brought as far as Dunbarton and isolated. The day after his isolation I took Dr. Alexander, a local veterinary, to see him. After a careful examination, he pronounced his trouble simply indigestion; but not being satisfied that it was not a contagious disease, I decided to have him killed. A post mortem by Dr. Alexander gave indubitable evidence that it was a case of tuberculosis. The State had then three cows in a pasture at Dunbarton; one of them was sick and was taken away from the others and put with a fine herd of ten cows of my own that she might be doctored. This cow was immediately slaughtered and found to be apparently in the last stages of this disease, and in consequence I lost my entire lot of cows, as they were afterwards examined and quarantined by Veterinary Maguire, of Concord, after he had by post-mortem examination found several of them diseased; and the selectmen of the town, after an appraisal, ordered all of them killed, though part of them were very slightly affected. We also had a sick cow in our very fine lot of thoroughbred Durhams and Jerseys, numbering twenty-nine, at the school. This cow was also killed and found to be very badly diseased.

Feeling that something should be done immediately, and knowing that tuberculosis had prevailed quite extensively at Rochester, this State, during last April, and at the Orono College in Maine two years ago, I determined upon a visit of inquiry. I went to Rochester, and there I called upon several prominent persons, among them one of the selectmen, and they very kindly gave me all the information possible. It seemed the universal belief at Rochester that Dr. F. I. Smith, one of the examining surgeons during the trouble there, was certainly a good expert. I thought his large and recent experience in the diagnosing and post mortem examination of so many animals at Rochester and other places, would be likely to offer conclusions of great value. All of the cattle, seventy-nine in number, killed at Rochester,

were examined and pronounced upon by Dr. Smith and Dr. Bailey, of Maine, and it appears by indubitable evidence (post mortem) that their diagnosis was a correct one.

I returned to Manchester without engaging Dr. Smith, as I wished to consult Mayor Varney in regard to the matter; after reporting to His Honor, he wished me to telegraph Dr. Smith to come to Manchester immediately and examine the State's herd, which was done, with the result generally known. Twenty-nine head were killed at this time, and all of them were found diseased, some of them badly, with tuberculosis. Four oxen and four cows were ordered by the veterinary quarantined for thirty days. No mistakes were made by Dr. Smith in his careful and cautious examinations, and we feel especially fortified in this destruction, as several local physicians were present at the post mortem of these cattle and all were agreed that every animal killed had this disease. I do not desire to increase the excitement, bnt I do feel it a duty in every way to help exterminate this terrible scourge now menacing the interests of agriculture, and perhaps the health of thousands in our commonwealth. I am as confident that there are cases outside of our herd as I am certain of the existence of the disease. At the expiration of thirty days the eight animals quarantined were again examined, and, as evidences existed of the disease, it was thought advisable to slaughter them; all were found more or less diseased, part of them very slightly.

One of a pair of the State's oxen was left in the pasture at Hillsborough when the others were taken out; on post mortem he was found diseased with tuberculosis, as were also several other cattle belonging to other parties in the same pasture. I own a pasture adjoining the one where the state oxen were kept, in which I had about thirty head, mostly steers from two to five years old; on examination only one, a five-year-old steer, was found to be very slightly diseased. The presumption is that he took the disease across the wall, as my young cattle were never with the state oxen. The State's herd of blooded heifers were kept during the summer in a pasture belonging to the State, located partly in Weare and partly in Deering. The selectmen of these towns about the 25th of September called Dr. Maguire, veterinary of

Concord, to examine them, as it was thought they were affected; after his diagnosis of the heifers, he pronounced one of them unsound, and a post mortem convinced him that he was correct. At the present time the other heifers are apparently all right.

I sincerely hope this terrible disease may not be general, but I think vigilance should be continued and careful examination should be made of herds, especially in this vicinity. Examination should not be frustrated on the grounds of expense; would it not be better to have a few cattle not affected destroyed rather than even one of the human family be afflicted by this scourge?

In closing, we will say we have been severely criticised for not discovering this disease sooner in our herd. In reply, will say that it appeared in evidence before the legislative committee of the State of Maine in 1886 that this disease had existed in the Agricultural College herd at Orono eleven years before it was discovered; they had lost many cattle by sickness, but knowing nothing of the symptoms of tuberculosis, the trouble was not feared as contagious. In fact, Dr. Bailey, veterinary surgeon, one of the finest experts in the country, and well and favorably known all over New England, was puzzled in his diagnosis of this herd until he examined the lungs of a cow that had died of this disease, the carcass of which had been left lying in a field.

The question is often asked me how I accounted for so general a development of this trouble at our institution, and in answer will say my theory is this: The ox purchased in Bradford unquestionably had this disease when he came to our barn. All of our cattle drank at the same trough, stood in the same hovel. Our stock were high-bred Durhams and Jerseys, and all scientists agree that high and inbred stock, especially Jerseys and Durhams, are much more susceptible to disease than stock generally kept among farmers.

The fact that this disease has prevailed in several institutions in Maine and Massachusetts within the last ten years to a considerable extent, when not known at all in small herds, is conclusive evidence that this scourge develops faster in crowded barns than where a small number of cattle are kept. At the Orono College, Maine, they lost seventy-nine head of high-bred cattle four years ago. It has made its appearance at the asylum for the insane in Worcester, Willard Asylum, New York, also at Amherst Agricul-

tural College, and many other places. Our herd of twenty-eight cows have had no pasturage for several years, except on about three acres, where they have been put almost daily through the summer, simply for good air and exercise. I think some of the cows that stood next to the ox had become quite badly diseased during the winter: they would naturally drop more or less sputa containing the germ of this disease on the closely cropped grass, causing largely the lamentable consequences. Our barn is well ventilated and always clean, but has contained for several winters past about sixty head of cattle, — consequently the air during the night would of course become somewhat vitiated and add somewhat to the progress of the disease. Experts have failed to discover in any of the surroundings anything that might tend to the spread of the disease. No scientist claims that it can originate of itself, the seed must exist of its kind before we reap a harvest.

Of the appraisal of our cattle, as provided by law, we do not complain; the appraisers did not take into consideration the fact that most of our cattle were thoroughbred and valuable on that account. Many of our cows could have been sold at auction for more than double the appraisal, as they were registered or eligible to a herd-book registry, — in short, we think we had the best herd of cows in New Hampshire; have always taken first premiums in this class at the New England and state fairs for many years. Now we trust the Legislature will cheerfully vote us an appropriation to at least partially cover this great loss to our institution and enable us to restock our farm, which is in a high state of cultivation, with some improved breed of cattle that have been exempt from contagion. Our hovels have been thoroughly cleansed by the removal of all parts of the stanchions and by replacing them with new material; beside, the barn has been disinfected through the agency of carbolic acid, sulphuric acid, copperas solution, and fumes of burning sulphur. We have built a new barn the past season, which affords ample room, together with the other, to keep stock in sufficient numbers to consume the entire crop of hay raised on our premises.

It may be interesting, especially to the farmers of this State, and possibly profitable, to learn something of the prominent symptoms of this disease. Of course I shall not attempt to

enlighten them as an expert on this subject, but simply give some facts gained by experience and careful watching of our herd for the last three months. The symptoms of tuberculosis in our cattle were at first very obscure. The ox was unquestionably diseased when purchased, as I have before stated, was apparently well excepting a cough of a peculiar kind, which was noticed soon after we began to work him; his appetite was fairly good and he kept in quite good condition for a year or more. After that time his appetite was somewhat diminished, the coat rough and staring, cough hoarse and weak, showed some enlargement of joints, accompanied with stiffness or lameness; later, loss of flesh and eyes were sunken and dull. We have found while assisting the veterinaries in their diagnosis of our cows that they invariably found an unnatural or high temperature, several degrees above normal; by percussion there was found to be a dullness in some parts of their chests. We think it is much more difficult to obtain a true condition of the lungs of an animal than of the human family, owing in part to the thick skin and hair of animals. In a diseased animal auscultation and percussion reveal instead of a normal murmur harsh sounds and dry crackle. I noticed that Drs. Bailey and Smith were invariably correct in their diagnosis of the animals killed. I took note of the condition of all the cattle slaughtered, before and at post mortem, and they were able to tell on examination, with a degree of certainty which seemed to me very remarkable, the particular location and stage of disease, whether of a severe or mild form. From what I have seen and read of this disease, I am satisfied that it is highly contagious, and may be transmitted by propagation; but we think the greatest danger is when the tubercles or tubercular deposit is connected to the mucous membrane and is developed sufficiently to start the virus, and if this is taken into the system of some other animal, either by breathing or digestion, the animal will become diseased.

J. C. RAY, *Superintendent.*

DECEMBER 1, 1890.

Since the close of my report, our institution and the State have experienced a great loss in the death of Judge Daniel Clark, who for a score of years was a valuable member of the board of trustees, as well as their efficient secretary. Judge Clark was seldom if ever absent from the quarterly meetings of the board, in which he took a great interest and a leading part. His wise and valuable counsels were highly appreciated by his associates, and his suggestions cordially indorsed. His interest in the welfare of the school was evidenced to me by the almost daily inquiries he made of the children, as we met on the street or at his office. Until the infirmities of age prevented, he made frequent visits to the schoolroom, work-shops, and playgrounds. Our teachers and inmates will long remember his golden speeches and kind words of sympathy, so often expressed in the schoolroom. Without claiming an intimacy beyond friendship and business relations, I think I knew Judge Clark well; his philanthropy was never questioned, his humanity was proverbial. As judge of the United States Court, he dispensed only justice; in the halls of our Congress he made a national reputation as a peer among the ablest members of that body; his heroic and successful efforts for the passage of acts of vital importance to the whole country are known throughout our land. Personally, I have lost a true friend. His kindness and friendship to me during a period of more than sixteen years of arduous duties at the school will be remembered by me as long as life shall last. Truly, a great and good man has gone to the reward of the just.

J. C. R.

ANNUAL REPORT

OF THE

TRUSTEES, TREASURER, AND PRINCIPAL

OF THE

STATE NORMAL SCHOOL

FOR THE YEAR ENDING

MAY 1, 1890.

MANCHESTER:
JOHN B. CLARKE, PUBLIC PRINTER.
1891.

BOARD OF TRUSTEES.

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REPORT OF TRUSTEES.

To the Honorable Senate and House of Representatives in General Court convened:

The trustees of the State Normal School herewith submit their annual report.

For the first time in the history of the school its official board have occasion to congratulate your honorable body upon its prospective permanency and efficiency in accomplishing the useful and highly beneficent purpose of its early friends and founders.

Established near the geographical center of the State, in one of its most beautiful villages, accessible by one of the best equipped railroads in New England, surrounded by grand and charming scenery for which New Hampshire is justly famous, but without adequate buildings or apparatus, and with no public or private endowment, its history has been the same as all other educational experiments under similar circumstances, — first a precarious reliance on tuition, with occasional appeals to the benevolent; then faint and trembling appeals to the Legislature for small pittances to barely keep alive an institution stamped with state paternity, and for which the State was responsible from the beginning.

The trustees and friends of the school, who ventured to disclose its poverty and nakedness, were for a time treated as little better than begging tramps, and when they applied for bread were asked if a stone would not do; and when they asked for a small loaf were reminded that

half a loaf was better than none,and that unless this precious bantling could live on the beautiful mountain scenery, pure Pemigewasset water, and exhilarating air of Plymouth, about which they had heard so much, and with less state aid, the Legislature would knock it on the head and down with it.

Thanks to the patience, ability, and faithfulness of its principal and teachers, and to a growing and enlightened public sentiment, the Legislatures of 1887 and 1889 rose to the level of their high responsibility and appropriated the sum of $1,200 and $60,000 respectively for the construction and equipment of a normal school plant at Plymouth commensurate with the wealth, intelligence, and dignity of the State.

By the provisions of the resolution appropriating this money a committee of three were to be appointed by the Governor and Council to expend the appropriation. An able and energetic committee was speedily named, competent architects employed, and excellent plans drawn for a first-class normal school building on the State's ground, and a comfortable and convenient dormitory on a beautiful lot near by, which was purchased by A. M. Kidder, Esq., a public-spirited citizen of Plymouth, and presented to the trustees for the benefit of the State. These buildings have been planned and are being constructed with reference to the particular educational work which is to be carried on therein, and the health, comfort, and convenience of the pupils who attend the school. The subjects of light, heat, and ventilation have been carefully studied, and the most advanced treatment of these matters that science and experience could suggest has been adopted in the construction of the buildings. The well-known and responsible builders, Head & Dowst, of Manchester, N. H., have taken the contract to construct the buildings, and the work is well under way. Most of the outside work is already completed, and the

whole will undoubtedly be finished in season for the fall term of this year.

We believe from a careful inspection of the work since the foundation ditches were excavated that it has been done in the most thorough and workmanlike manner; that for every dollar expended by the State a dollar's worth of honest, faithful work and materials has been given in return, and that when completed the State will have a solid, well-constructed, and serviceable set of public buildings of which the people can feel justly proud.

The appropriations referred to will undoubtedly be all needed in the erection of buildings and the equipment of the same with the furniture usually required to make such a plant suitable for occupancy. Owing to inadequate room the physical and chemical laboratories have heretofore been very imperfectly equipped. Natural history and art cabinets have been almost entirely neglected, and the school library has been of very limited use and dimensions.

The enlarged accommodations in the new school building, and the great importance to the highest educational work of the school of the best modern appliances for illustrating and teaching the sciences, make a special appropriation by the Legislature for the purchase of apparatus for the chemical and physical laboratories, specimens and supplies for the natural history and art cabinets, and books for the library, desirable if not absolutely necessary.

It would be poor policy indeed to invite students to beautiful and convenient public buildings, but with apparatus and general school supplies and equipment wholly insufficient for the educational purpose in view, and far inferior to that found in similar institutions anywhere in the country.

The annual expense of supporting the school in its enlarged home, with its increased facilities and faculty,

will necessarily be increased in due proportion. It is hoped, however, that the finances of the school are in a condition to bear this increased annual expense until the Legislature of 1893 convenes, when a larger annual appropriation will be necessary. The school has been doing excellent work with the means and accommodations provided, and a gratifying increase in the number of its students is noticeable in the last two catalogues.

With such modest aid for the objects stated herein as the Legislature will undoubtedly think it wise to grant, the school may well take rank with similar institutions in other States, and be of the greatest utility in shaping the education of our children after the most enlightened and worthy models. The reports of the treasurer and principal herewith submitted will show the financial and general condition of the school, the amount and quality of work done, the methods employed, and results attained. The last catalogue and circular of the school will also be laid before you for such further information as you may desire.

ALVIN BURLEIGH,
Secretary for the Trustees.

TREASURER'S REPORT.

PLYMOUTH, N. H., May 1, 1890.

To the Trustees of the New Hampshire State Normal School:

GENTLEMEN, — I have the honor herewith to submit my report as treasurer of the State Normal School for the year ending May 1, 1890.

RECEIPTS.

Cash on hand May 1, 1889 . .	$2,623.07	
Received of state treasurer, balance of appropriation for year ending June 1, 1889 . . .	2,000.00	
state treasurer, appropriation for year ending June 1, 1890	7,000.00	
non-resident pupils for tution in model schools . . .	134.25	
treasurer of Plymouth school district for support of model schools . . .	2,000.00	
		$13,757.32

EXPENDITURES.

Paid teachers' salaries as follows:

Prof. C. C. Rounds, salary for four months to September 1, 1889 .	$666.67

Prof. C. C. Rounds, $\frac{8}{10}$ of salary for current year	$1,600.00	
Ella C. Williams	160.00	
Harriette H. Winslow	120.00	
Sarah K. Smith	90.00	
Eusebia A. Minard	700.00	
George A. Mirick	760.00	
E. S. Riley	600.00	
Carrie W. Mudgett	540.00	
Maribelle Curtis	400.00	
Kate S. Rounds	225.00	
Mary L. French	490.00	
Lillian E. Rosebrook	320.00	
Amelia L. Graupner	320.00	
John Keniston (music)	120.00	
		$7,111.67

MISCELLANEOUS.

Advertising	$5.60	
Mats for boarding-house	2.94	
Fuel	343.21	
Repairs	28.37	
Diplomas	28.50	
Water rental	50.00	
Insurance	114.00	
Models for drawing class	8.40	
Copies to title deeds, etc.	6.50	
Services of janitor	390.67	
Treasurer's salary to June 1, 1889	50.00	
Balance in hands of treasurer May 1, 1890	5,617.46	
		$6,645.65
		$13,757.32

Estimated expense for remainder of school year	$2,500.00
Probable balance on hand at close of year .	3,117.46

Respectfully submitted.

GEORGE H. ADAMS,
Treasurer.

MAY 13, 1890.

I have examined the foregoing account, and find it correctly cast and properly vouched for.

W. H. MITCHELL,
Auditor.

REPORT OF THE PRINCIPAL.

PLYMOUTH, N. H., December 24, 1890.

To the Trustees of the State Normal School:

GENTLEMEN, — I have the honor to transmit herewith my seventh annual report, for the school year ending June 20, 1890, the twentieth year in the history of the Normal School. During these twenty years the total number of different pupils connected with the school has been 1,654, and 385 of these have graduated from its course of study.

The attendance in the various departments of the school for the year has been as follows:

NORMAL DEPARTMENT.

Total number of different pupils		102

TRAINING DEPARTMENT.

Total number of different pupils in		
Primary schools	89	
Grammar schools	85	
High school	57	
	—	231
Total enrollment in normal and training schools .		333

Every county in the State is represented in the membership of the school. All the graduates of the year, with the exception of one prevented by illness, have taught since graduation, and there have been many demands for teachers which could not be supplied.

The number in attendance the past year is the largest for sixteen years. The work of the school has been carried on with great and increasing difficulty in consequence of the inadequacy of accommodations. The $71,000 now being expended in the erection and furnishing of new buildings will enable the school to commence its twenty-first year in a suitable home.

The arrangement of a course of study for normal schools is a problem presenting many difficulties. The experience of more than twenty years convinces me that a satisfactory solution is impossible except by a lengthening of the course. More than fifty years ago the necessity for providing the common schools with better qualified teachers led to the establishment of the first normal school in New England. Soon after, the course of study was made one of two years in length, and thus it has continued. Then the studies in the common school were few, and the demands upon the teacher could be met with comparative ease. Gradually new subjects have been added, and largely from the influence of the normal school itself, a higher and more exacting standard of professional ability has been set up. Within this period graded systems of schools have been widely extended; high schools have been everywhere opened to girls, and in the later years collegiate education has been made equally attainable by both sexes. While thus the demands upon the teachers of the common schools are made more exacting, and normal school graduates are needed more and more in the higher grades, by the extension of high school and collegiate education, and the influence of graduates of these institutions, the standard of scholarship demanded in the teacher has steadily risen, and normal schools have been compelled to increase their work in order to meet this demand.

Nevertheless, while so much more is demanded, pupils come to the normal school from the schools of many of

the country towns with scholarship but little if any in advance of that attainable therein fifty years ago. The lack of anything which can really be called a state system of education leaves each town to work out the educational problem for itself, with no such authoritative guidance or direction as can assure advance. While in prosperous and wealthy communities popular education improves, in the poorer towns a decline in prosperity manifests itself at once in a decline in the efficiency of the schools. To raise the standard for admission to the normal school so as to admit none but high school graduates, would exclude many who, from maturity of judgment, strength of character, and earnestness of purpose, ultimately become most successful teachers, and would break the connection between the normal school and the country towns. Such a break would be a calamity to the educational interests of the State.

To meet these difficulties the course should be made one of three years instead of two, giving advanced standing according to scholarship. Graduates of good high schools would then be able to graduate in two years, as now, while the course would be lengthened by one or two terms for those unable to obtain at home all the preparation in scholarship to be desired, but possessing the other qualities requisite for successful teaching. Such a change in the course would make it possible to give a fuller development to subjects of study now receiving too little attention, to commence the professional studies on a higher plane, and to give more time to training in teaching. In this view there is substantial agreement among the normal school teachers of New England.

Of equal importance with this course of study is the course in the training schools, covering eleven years of school life. In these schools normal pupils are to seek their ideals, and are to develop the skill in teaching upon which their future success must depend. A course of

study which might satisfy a local demand, or embody the views of one person, however wise he might be, would not suffice for the training of those whose field of labor is a State. The course demanded for such a use must embody the results of wisdom in planning, of intelligence and skill in execution, of testing over the widest possible field; it implies the proper adjustment to each other of subjects best for discipline and those best for use, with due regard to the successive phases of development of the pupil, and adaptation to a national demand.

The construction of such a course is a problem, the difficulty of which will be understood from the mere statement, even by those unacquainted with the details of teaching and of school administration. Our training school course is a growth; it has developed year by year from our own experience, and from comparative studies and observations, no one of which, from the local nature of our school system, can cover a broad field. We must look abroad for systems of schools planned to meet the wants of a people, and for many reasons France furnishes the best field for study. The marvelous advance made within the last ten years in the education of the French people is the result of a system of free schools, carried on throughout the entire country, on a uniform course of study arranged by a national council of educational experts.

Some important changes have been made in our training school course as a result of studies of the French schools through reports, and by personal inspection in 1889. A fuller report is deferred that it may be made more complete, but some brief statement is pertinent to the matters now under consideration.

In the attempt to obtain a correct view of the plan and results of the system of schools, I owed much to school officers and teachers: — To M. B. Buisson, of the department of public instruction, for the selection of valuable

educational documents, for guidance through the wonderful educational exhibits of the nation and of the city of Paris, and for information in personal interviews; to M. Carriot, director of elementary instruction for the department of the Seine, for reports, for introduction and admission to the schools of Paris, and directions given to open to my inspection all cases of exhibits in the exposition of the city; to Mdlle. Ferrand, directress of the Young Ladies' Normal School in Paris, for courtesies extended during my visits to the school, and an extensive and valuable collection illustrative of the work of the school; to Mdlle. Schlüssel for the devotion of her time and for full information regarding details; to Mdlle. Jacquin, directress of the Model Schools, and to Mdlle. Sauvinet, teacher of drawing, for their kind response to inquiries regarding their departments.

The remarkable difference between the French school system and our own is in the great care taken to make full and rich the course in the common school below the high school, in which most people receive their entire school education. American courses of study are usually so constructed that their significance and completeness are found only in the high school. In our model schools the attempt is made to furnish a type on which the common school can be organized so as to give a wider exercise of the pupil's faculties, and to furnish him with the conditions of intelligence over a broader field — not to teach of the various subjects all that may be known, but to make clear "those things of which no one should be ignorant." In two important lines of instruction — elementary science and morals — pressing for consideration in the education of the present day, but few American schools are working in any systematic way, while in the schools of France courses of instruction in these have been fully organized and are now in successful operation.

The instruction in these subjects in our course follows in the lines thus thoroughly tested.

Much attention has for years been given to drawing in the better class of graded schools in this country, but comparison of the results attained in our own and in the French schools was always greatly to our disadvantage. Seeking the causes for this marked superiority, I found these prominent: Teachers are more thoroughly trained, much more time is given to the subject and to each lesson, there is a clearer perception of the ultimate aim of the instruction and a more intelligent working toward the attainment of this aim, and better models are used. Arrangements were made in Paris for the purchase of the models prescribed for use in the schools, and these have been obtained. The time given to drawing in the normal school has been much increased, modifications have been introduced into the course, and better results are already apparent.

On many accounts it would be of great advantage in the normal as in most other schools, if classes were formed only once each year, at the beginning of the fall term, instead of twice, as is now the case. It would then be possible to divide large classes into suitable sections for instruction; with the number of teachers at our command such division now is usually impossible. It is highly probable that nearly all could easily adapt themselves to such a change. The classes entering in the winter are much smaller than those entering at the beginning of the year, and sometimes nearly disappear before the end of the course. It would seem that the personal convenience of a very few should not stand in the way of larger good to the school. I would ask that this matter be considered by the board.

In the new schoolhouse there are beautiful and convenient rooms for the library, for drawing, for physical and chemical laboratories, and for collections and

instruction in natural history, and a large sum will be required for the purchase of the books and apparatus needed.

The demand made upon the school for teachers has more than kept pace with its increase in numbers, and for the past few years has been in advance of its ability to supply. There are frequent evidences of appreciation of its work. As representative of many, two from school officers in towns prominent for their interest in education and the excellence of their schools, may be quoted. One of these says, in applying for a teacher: "You have never selected a teacher for us who has not succeeded." Another: "Until recently I did not think much of normal schools, but now the normal teachers are the best in our town, and I think we ought to get our teachers from Plymouth."

The normal school in its new home will be entirely the property of the State. With the excellent facilities then at its command, I trust its work will merit a still larger measure of public confidence.

Respectfully submitted.

C. C. ROUNDS,
Principal.

December 24, 1890.

REPORT

OF THE

FISH AND GAME COMMISSIONERS

OF

NEW HAMPSHIRE

TO THE

GOVERNOR AND COUNCIL,

DECEMBER, 1890.

MANCHESTER:
JOHN B. CLARKE, PUBLIC PRINTER.
1891.

GENERAL REPORT.

To His Excellency the Governor and his Honorable Council:

The Commissioners on Fish and Game herewith submit the annual report of their official operations for the calendar year ending December 1, 1890:

The success that has attended the labors of the commission the past year affords good ground for encouragement, and shows not only the necessity of continuing the work, but of extending it as rapidly as possible without incurring too great an expense.

Each year the subject of artificial propagation and dissemination of food and game fishes is becoming better understood and appreciated by the people of our State.

By the improved method of breeding and transportation better results are being obtained, — results that a few years ago were hardly anticipated. That these results are now being appreciated by all classes is evident from the fact that the most persistent demands for young fish come from the towns where the most work has been done in restocking the streams during the past few years. That the work has proved a success and has become popular is proved by the large amount of testimony that has been received from citizens of the State as to the good results already obtained. It must be remembered that eight years ago we had only about fifty thousand young trout for the whole State, only about half of what we now send to a single county.

The work of the commission is now almost entirely devoted to the cultivation of fish that are indigenous to our

waters, and the introduction of varieties that are known to thrive under the conditions that they find in our streams and lakes. No finer lake trout can be found in any country than those of Newfound lake. They grow to a large size, with firm, well flavored, pink flesh, giving good sport to the large number of fishermen that visit the lake each spring. It is a fish well worthy of cultivation, not only for keeping up the reputation of the lake as a noted fishing resort, but for introduction into other suitable waters in the State.

Many complaints have been made to your commissioners of the great damage done to many of our finest trout streams by sawdust and mill refuse. This is a matter over which we have no control. It rests with the Legislature to take such action in the matter as may to them seem best for all parties concerned.

At the last session of the Legislature appropriations were made for building and maintaining three new hatcheries, — one to be built at Bristol, one at Laconia to be devoted to the cultivation of lake trout and landlocked salmon, and the other in Cheshire county for the purpose of supplying that part of the State with brook trout. These hatcheries have been built and fully equipped. The one at Bristol is fitted for five hundred and fifty thousand lake trout eggs, with room to add hatching-troughs enough to make the capacity sufficient for seven hundred thousand eggs. The one at Keene has a capacity of eight hundred thousand brook trout eggs. The one at Laconia will, as now filled, contain nine hundred thousand lake trout eggs, with sufficent room to add another hundred thousand.

For a detailed report of costs see report of Superintendent.

As the field of fish culture and fish propagation is constantly increasing, it is to be expected that the expenses of the commission must also increase. There is no other State in the Union that has accomplished as much good

for the money expended as has New Hampshire. This is due to the fact that all the work has been done in a practical, business-like manner.

It is with pleasure that the commission has seen the formation of fish and game leagues in various parts of the State for the protection and propagation of the fish and game in their localities. Organizations like these are of great assistance to the board. They create a healthy sentiment in regard to the necessity of a close season for fish and game, and a due regard for the game laws in the localities where they are established, and educate the people to a better knowledge of the value of the streams and lakes in their section of the State.

NEW HAMPSHIRE WATERS.

The commission have a list of 174 towns in the State in which are located 558 ponds and lakes, including a description of the bottoms, sandy, muddy, stony, etc., number of acres in each, and species of fish found in them. The acres aggregate nearly three hundred thousand, exclusive of Lake Winnipesaukee and the many considerable rivers and brooks therein, estimated as covering an additional one hundred thousand acres. Four hundred and three ponds and lakes contain ten acres and upwards of water.

LIST OF 37 TOWNS CONTAINING OVER 900 ACRES WATER.

Towns.	Ponds and lakes.	Acres.
Andover	5	950
Auburn (Massabesic)	1	2,500
Bridgewater (Newfound)	1	5,700
Canaan	5	3,000
Chesterfield	3	1,550
Conway	2	3,200
Deerfield (Pleasant)	1	1,100
Effingham (Province)	1	1,000
Freedom (Danforth and Ossipee)	4	3,300

Hampstead	3	1,650
Hancock	6	1,000
Holderness (Squam)	1	6,400
Hooksett	5	1,475
Hopkinton	6	1,000
Madison (Silver)	1	2,500
Milton (Tri-Echo)	1	2,000
Meredith	4	2,300
New Durham	5	1,425
New London	5	2,275
Northwood	7	1,100
Nottingham	2	1,300
Ossipee	6	1,540
Pelham	4	950
Piermont	4	1,950
Raymond	4	1,300
Rindge	13	4,637
Salem	3	1,300
Sandwich	6	1,000
Stoddard	4	2,560
Strafford	4	1,700
Sunapee (Sunapee)	4	6,650
Tamworth	10	1,675
Wakefield	4	5,200
Washington	21	2,982
Whitefield	6	1,000
Windham	4	3,450
Wolfeborough	7	7,080

SPECIES OF FISH IN 558 PONDS AND LAKES.

Three hundred twenty-one lakes and ponds contain pickerel, perch, and pouts; in 113, black bass have been placed; in 73, landlocked salmon have been introduced; 39 ponds have brook and lake trout (native fish).

It is claimed that an acre of water will produce and yield annually, if properly cared for, as much food as an acre of

land. According to the census of 1890, we have about 365,000 inhabitants and as many acres of water in the State, an acre to each inhabitant. Is there any reason then why its people should not have all of the fish they require for food? Nature has bountifully stocked the waters with fish. The improvidence and covetousness of man have made many of its waters barren. Reproduction has been hindered by ignoring or paying little attention to nature's fundamental law, the producing season. Pickerel, perch, and bass are spring spawners, and go on the beds to lay their eggs in March and April; the trout and salmon family in September and October. At this time they are easily taken. That is the season that people go to the spawning-beds and take large numbers by netting and spearing, which has materially depleted many of the waters of the State. These people are now known as "fish hogs," and have a very depraved appetite to consume fish taken from the spawning-beds.

Laws with heavy penalties have been enacted and placed upon the statutes, prohibiting the taking of fish during the breeding season, which has done much to protect and increase the number of fish in many waters. It will take a long time to reproduce them and furnish fish for the many anglers of our own State, and the thousands of visitors who come to this State for their summer outing, to cast their lines in our many waters. There are some sections of the State where illegal fishing is still carried on. It has been a difficult matter to make arrests and get the necessary proof on some of the larger lakes containing thousands of acres, as the illegal fishing is done mostly in the night. The commissioners have succeeded in making quite a number of arrests and securing convictions. Several parties have been fined, and two persons have been sent to the county jail. One or two convictions in different sections have had a salutary effect.

The restocking of many brooks with brook trout, and

lakes with lake trout and landlocked salmon fry from the state hatcheries, has shown grand results. A large increase of fish has been reported from many sections of the State where they have been placed. The last four years have been very favorable to the growth and increase of fish. There have been no droughts to dry up the streams, the continued high water has furnished plenty of feed, and larger and better strings of trout have been secured than for many years.

Every year greater demands are made for increased numbers of young trout fry ; efforts are being made to supply the demand. No change in the laws has been made, except one inch has been added to the legal length of brook trout, making it a severe penalty for taking brook trout less than five inches in length. Good results have been obtained from the placing of lake trout and landlocked salmon in Sunapee and Newfound lakes ; thousands of pounds of these valuable fish have been taken in the last two years. It is claimed that no finer fishing can be found in any of the waters of New England. These waters are peculiarly adapted to their growth ; large numbers have been taken weighing twelve to sixteen pounds each. The smelt placed there a few years since furnish an abundance of food.

OYSTERS.

The commissioners would respectfully call the attention of the Legislature to the fact that in the southeastern part of the State there is a large body of brackish water, containing several thousand acres, and known as Great Bay. In former years, oysters of a very superior quality existed there in considerable numbers. These have by overfishing or dredging become practically extinct. It has been proved by re-stocking such waters in other States that each acre with a bottom suitable for the cultivation of the oyster can be made to yield from three to four hundred dollars per acre,

with practically no larger outlay than the cost of raising an acre of corn. In view of this fact, we deem it advisable that the Legislature should take some action to provide for the examination of the waters of Great Bay, and if suitable areas of bottom can be found for the successful cultivation of the oyster, the State can, for a small outlay, make this body of water a source of revenue to the State, and also to the towns bordering upon it.

SAWDUST.

Your commissioners have been in receipt of many complaints from all parts of the State in regard to the pollution of streams by sawdust and mill refuse, and if these complaints are well founded it would seem as though the time had come for some action to be taken by the Legislature to abate in some degree this pernicious practice. The baneful effect of sawdust, as one of the most destructive agents for polluting streams and destroying fish life, has caused the enactment in many countries of stringent laws to prevent this evil.

It is a well-known fact that where sawdust, mill refuse, and other deleterious substances have been thrown into our streams, fish life and vegetation of all kinds have in many cases been entirely destroyed. This fact is particularly noticeable among the higher order of fishes, especially the brook trout of our mountain streams. And it is a lamentable fact that many of our purest and coldest streams, that a few years ago abounded with the finest of trout, are now entirely destitute of this noble fish, and instead of the pure and limpid water that once flowed in their channel it has the hue of ink, and an odor to which asafetida would be preferable, caused by the bottom and eddies being filled with a foul and rotting mass. If the sawdust, like a board, would float, it would cause but little injury, but it becomes soaked, sinks to the bottom, collects in masses in the pools, where it throws off poisonous gases

that destroy and drive away insect life, which is the principal sustenance of fish in their younger stages of existence.

Sawdust and mill refuse, as previously stated, are manifold in their range of destruction when allowed to be cast into waters to which fish, especially those of the salmonidæ, are indigenous or where animal or vegetable life is to be sustained. It is an artificial product, alien to and engendering latent diseases of various kinds, with fatal results in all waters where fish life exists. Its introduction into streams and other waters through the improvident agency of mankind has so changed their purity and fouled their beds as to ruinously operate against the many natural requirements indispensably necessary to the production of young fish and growth of the better class of fish.

We will only add a few extracts form the reports of commissioners of other States. Prof. J. W. Milner, of the United States Fish Commission says: "As everywhere, civilized man disturbs the balance of nature, and becomes the great enemy of all forms of life that do not conform to his artificial methods for their protection, not only by the hundreds of artifices for the capture of the fish, but in foul drainage from cities and manufactories, and in quantities of sawdust from mills, he drives them from their favorite haunts and spawning-grounds, and their food is destroyed by waters tainted with fatal chemical combinations."

INJURIOUS RESULTS OF SAWDUST.

EXTRACTS TAKEN FROM REPORTS OF FISH COMMISSIONS FROM OTHER STATES.

John Stewart, of Ottawa, being examined, said:

"Sawdust covers the spawning-beds of fish, and it gets into the gills of the fish, and of course they will not come up the river. The gas that comes from it is the same as that which comes from the swamps of ague malarial districts; it is also explosive."

The "National Fish Cultural Association Journal," April, 1887, states:

"Another impediment to the rapid accomplishment of the desired result (for increasing the supply of valuable fishes and other aquatic forms) is the absence of concurrent protective legislation of a sufficiently stringent character to prevent unnecessary waste of fish during the critical period of spawning; and the erection and maintenance of impediments to their movements in reaching the spawning-grounds. This is especially the case with the shad and the salmon."

EXTRACT FROM THE MICHIGAN STATE LAWS, SECTION 10.

"No person shall put in any of the waters bordering land where fish are taken by the legal owners or occupants thereof, any ship's ballast, stone, sand, ashes, slabs, sawdust, or filth of any other description. . . . shall be subject to a fine not exceeding $50."

EXTRACT FROM REPORT OF MR. S. WILMONT TO THE DEPARTMENT OF FISHERIES, REGARDING SAWMILLS AND SAWDUST.

"Not only in the fishing industry of the country is it found that many valuable fish-producing waters have been almost wholly deprived of fish-life from the noxious and wide-spreading evil influences produced from sawdust deposits, but also in many instances navigation has become seriously impeded by the operations of this too long practiced habit, which is forbidden in the statute books of this and almost every other civilized country where the safety of the fishing and navigable interests is considered worthy of legislative protection."

Henry A. Gray, assistant chief engineer, said:

"It is no uncommon occurrence for explosions to take place in the gas generated from sawdust. In January last an explosion took place opposite the Rideau river and broke up the ice, bringing from the bottom of the river a large amount of mill refuse. Another explosion took place and ice fourteen inches thick, covering an area of fifteen hundred feet, was thrown up and broken into small pieces. Decomposing sawdust will not float; it sinks. It never rots. The smell is very obnoxious and injurious to health. The sickening smell made me ill and also some of the men. At Spanish river, Byng Inlet, the men after going there took typhoid fever, which the doctors said was attributable to the gases arising from the decomposed sawdust. I have no doubt if the steamer 'Peerless' was passing over at the time of one of these explosions it would destroy her."

Robert Surtees, C. E., of Ottawa, says:

"We have had difficulty in connection with the recent epidemic of typhoid fever, and the analysts all agree that it came from pollution of the water by organic matter, bark, sawdust, and sewage.

"All sawdust can, by the exercise of some small ingenuity and by the application of comparatively inexpensive machinery, be conveyed out of nearly every sawmill in the country, when it can be dumped into fire pits, to be consumed or otherwise disposed of."

Respectfully submitted.

GEORGE W. RIDDLE,
ELLIOTT B. HODGE,
JOHN H. KIMBALL,

Fish and Game Commission of New Hampshire.

MANCHESTER, December 1, 1890.

REPORT OF SUPERINTENDENT.

Plymouth Station.

The run of salmon in the Merrimack river this season was larger than ever before. This was no doubt owing to the unusually high water during the entire summer. No salmon were taken after September 1, as the water was so high that the nets could not be kept in place, thus allowing all of the fall run to pass up the river.

As many as fifty salmon were in the large pool below the falls at one time. Sixty salmon were taken and placed in the reservoir pond at the hatchery. From these fish two hundred thousand eggs were taken in October and the fish returned to the river. Many salmon were seen spawning in the river the last of October.

Had it not been for the high water in September and October one hundred salmon would have been taken. Many of these fish were smaller than usual for this river. Some of the females that gave eggs would not weigh over six or seven pounds; the largest male taken weighed twenty-five pounds, female twenty pounds.

Over one million brook trout eggs are now laid down in the hatchery. This is an increase of three hundred thousand over 1888. This increase is due to the number of trout added the past two years.

As instructed, I sold two hundred pounds of the large male trout from the breeding-ponds, for which I received eighty dollars. This money was used in part payment of wild trout purchased, of which I have added 6,187 from

four to eight inches in length. The price paid for these fish was three dollars per hundred, delivered at the hatchery. The addition of these trout will in two years add materially to the number of eggs, and will necessitate the building of more tanks and ponds for their accommodation.

Since the adoption of the new-shaped landing nets four years ago, not a single salmon has been lost by that fatal disease, fungus. I have adopted the same style for the trout nets; and in handling the many fish required to produce one million eggs not a single spot of fungus has been seen.

The dam at the outlet of the reservoir pond has been built over and the planking replaced with solid earthwork. The waste pipe at the outlet has been replaced by a new and better one, and the dam is now in a safer and much better condition than it has been for some years.

Repairs and changes are now in progress in the trout ponds, rendered necessary by the increase of trout purchased last year.

I have been able to purchase only 886 wild trout this year, as the change in the legal length to five inches raised the price higher than we could afford to pay. These were paid for with money received from the sale of male trout. This number will more than make good the loss that has occurred by death, by king-fishers, mink, and other vermin. Some thirty king-fishers have been caught this season in a small steel trap placed in the top of a long stake near the trout ponds. To have destroyed this number by shooting them would require considerable expenditure for ammunition as well as a great deal of time in watching for them, and if left undisturbed they would soon clean out all the trout under ten inches in length.

The distribution of young fry began in April and was finished the first week in June, and although many lots were carried a long distance, no loss occurred in handling.

The distribution of fry to the various towns and lakes for 1890 is as follows:

BROOK TROUT.

Derry	10,000
Manchester	5,000
Candia	5,000
Hooksett	10,000
Bedford	10,000
Goffstown	10,000
Allenstown	10,000
Derry, 2d lot	5,000
Merrimack	5,000
Weare	10,000
Kingston	5,000
Kensington	5,000
Dover	10,000
Madbury	5,000
Lee	5,000
Durham	10,000
Chester	5,000
Wilton	5,000
New Ipswich	10,000
Hampton	10,000
Milford	10,000
Hudson	10,000
Exeter	10,000
Keene and vicinity	20 000
Antrim	5,000
Nelson	5.000
Munsonville	10,000
Chesham	10,000
Fitzwilliam	5,000
Troy	10,000
Harrisville	10,000
Marlborough	10,000
Peterborough	10,000

Winchester	5,000
Columbia	5,000
Stewartstown	10,000
Colebrook	10,000
Grafton	10,000
Canaan	10,000
Lebanon	10,000
Plainfield	5,000
Hancock	10,000
Greenfield	10,000
Hebron	5,000
Lisbon	10,000
North Conway	10,000
Jackson	15,000
Warner	10,000
Claremont	20,000
Washington	5,000
Orford	10,000
Penacook	5,000
Concord and vicinity	20,000
Waterville	16,000
Campton	5,000
Franconia	5,000
Jefferson	15,000
Plymouth	10,000
Laconia	5,000
Nashua	10,000
Fabyan's	5,000
Crawford House	5,000
Sandwich	8,000
Enfield Center	10,000
Andover	5,000
Bennington	5,000
Woodstock	5,000
Ellsworth	10,000
Total	589,000

LAKE TROUT.

East pond, Enfield	15,000
Mascoma lake, Enfield	5,000
Massabesic lake	20,000
Boscawen	10,000
	60,000

LAKE TROUT FROM SWITZERLAND.

Newfound lake	8,000

LOCH LEVEN TROUT.

Retained at hatchery	3,000

LANDLOCKED SALMON.

Granite lake, Cheshire county	10,000
Chesterfield lake, Cheshire county	10,000
Newfound lake at Hebron	15,000
Newfound lake at Alexandria	20,000
Lake Winnipesaukee at Moultonborough	30 000
	85,000

PENOBSCOT SALMON.

Pemigewasset river	240,000

SAIBLING.

Retained at hatchery	4,000

AUREOLUS OR GOLDEN TROUT.

Nelson	12,000

CALIFORNIA TROUT.

Sunapee lake	10,000
Campton	10,000
	20,000

Total distribution from Plymouth station	1,021,000

BRISTOL STATION. — LAKE TROUT.

Webster lake, Franklin	15,000
Newfound lake	460,000
	475,000

SUNAPEE LAKE STATION. — LANDLOCKED SALMON.

Sunapee lake	95,000
Pleasant pond, New London	10,000
	105,000

BROOK TROUT.

Sunapee lake	50,000
Sutton	5,000
	55,000

AUREOLUS OR GOLDEN TROUT.

Sunapee lake	90,000
Nelson	12,000
	102,000

TOTAL DISTRIBUTION.

Brook trout	644,000
Lake trout	535,000
Loch Leven trout	23,000
Alpine lake trout	8,000
Saibling	4,000
California trout	20,000
Aureolus or golden trout	102,000
Penobscot salmon	240,000
Landlocked salmon	180,000
Total for 1890	1,756,000

Sunapee Lake Station.

The work of securing the fish to furnish eggs for stocking the hatchery began September 19. The landlocked

salmon were found in greater numbers than ever before, and the requisite number for spawners were soon secured. After securing over one hundred and ten thousand eggs the salmon were allowed to go up the brook and deposit their eggs naturally. This is the largest number of land-locked salmon eggs that has been taken at this station. The spawners were all secured at the mouth of the brook near the hatchway. The average weight was from eight to ten pounds.

This lake is becoming noted far and near as a salmon lake, and the wonderfully rapid growth made by these fish proves conclusively that the water and food supply are well adapted to their wants.

A large number of salmon weighing from 10 to 14¾ pounds have been taken with rod and line the past season. About the same number of brook trout were taken as last year. The aureolus came on their spawning-grounds early in October. One hundred thousand eggs were taken.

Since my last report I have received two specimens of this singular trout from Dan Hole pond in Tuftonborough and Ossipee. After making an examination of them and finding them identical with the Sunapee form, I forwarded them to Dr. T. H. Bean, curator of the department of fishes in the national museum at Washington, for his examination. He pronounces them exactly like the Sunapee trout. My reason for sending the specimens to him was that he was the only ichthyologist in the country who, at that time, had had an opportunity of examining adult specimens of this species, with one exception, Mr. Garman, and he had only had one or two. There is now no doubt but what this trout is not only a native of Sunapee lake, but that it exists in at least three or four other lakes in the eastern part of the State, and most likely in many lakes to the north of New Hampshire and Maine.

There are now at the hatchery seventy-five thousand

landlocked salmon eggs, seventy thousand brook trout, and eighty thousand aureolus eggs.

Bristol Station.

By direction of His Excellency the Governor, the hatchery at Newfound lake was built in September, 1889. A site was selected just below the dam at the outlet of the lake; the water supply being taken from the dam. A good, plain, substantial building was erected and fitted with troughs having a capacity for five hundred and fifty thousand eggs for lake trout. The notice given for building the hatchery was so short that only one day intervened between its completion and the stocking of the house with eggs.

The expense of building, equipping, and stocking the hatchery is given in the

FINANCIAL STATEMENT.

Appropriation		$1,000
Paid Morse & Whyte, wire for screens	$33.00	
C. P. George, as per contract for building	370.00	
C. P. George, extra labor	17.52	
J. R. Sleeper, grading	13.24	
G. A. Robie, iron pipe and labor	88.60	
E. F. Emerson, hatching-troughs	76.00	
A. Wheeler, paraffine varnish	3.25	
S. D. Fellows, stove and pipe	11.65	
For sundries	1.00	
E. B. Hodge, expenses	68.70	
Total cost of building and fitting		$682.96

Expense of stocking hatchery with 525,000 eggs taken from the trout in Newfound lake:

Paid Geo. H. Fowler, labor	$20.00
Darius Cross, labor	18.00

Paid C. N. Drake, labor	$19.40	
E. T. Pike, labor	21.50	
Cost of stocking		$78.90

Expenses for care of eggs and young fry during the winter, 1889:

Paid J. R. Sleeper, wood	$5.25	
N. Sleeper, labor	34.00	
Cost of hatching eggs		$39.25
		682.96
		78.90
Total		$801.11
Balance		$198.89

Last season the large trout came on the spawning-beds the 13th of October, but the work of securing the spawners did not begin until the night of the 16th. This work has to be done at night, and the most of it between twelve and four o'clock in the morning. The fish are taken by dipping them up with landing nets into a tub or box in the boat; they are then placed in a large floating car or crate, where they are kept until morning, when the females are stripped and the eggs fertilized; the fish being immediately returned to the water. The fish are so plenty that a hundred pounds could be taken out at a single dip if the net was large enough to hold them. So plenty were the trout that in three nights spawners enough were secured for five hundred and twenty-five thousand eggs, at an expense of less than fifteen cents per thousand. These eggs have been hatched and planted in the lake at an expense of about seven cents per thousand. During the season of 1890 the work of securing the eggs was under the direction of Mr. George H. Fowler. The fish were late in coming on the spawning-grounds and it was necessary to keep the force of men on the lake for

over a week before any spawners could be secured; but when they did put in an appearance they were more plenty than last season. This is encouraging when we consider that hundreds of pounds of trout and salmon were caught in May and June; one fisherman's score amounting to over seven hundred pounds. The average weight of the females from which the eggs are taken is about twelve pounds, while some of them would weigh twenty. Owing to the heavy rains the water was unusually high in the lake, rendering the task of securing the spawners a difficult one. Considerable skill is required to be able to distinguish and pick up a female in eight or ten feet of water from among a large number of male fish that are crowding around her.

Notwithstanding the disadvantage of the high water five hundred and fifty thousand eggs were secured, filling the house to its full capacity.

Laconia Station.

The place selected for the new hatchery by the commissioners after a careful examination of the various sites proposed was at Weirs, in the town of Laconia. This was afterwards, by direction of His Excellency the Governor, changed to the village of Laconia, where the house was built. This change added materially to the cost of the building. The expenses have, however, been kept within the appropriation.

FINANCIAL STATEMENT.

Paid Morse & Whyte for wire screens . .	$43.56
E. F. Emerson, building hatchery, as per contract	637.50
W. D. Huse, for iron pipe . . .	159.29
Laconia Lumber Works . . .	96.52
O. H. Daniels, sundries . . .	26.32
	$963.19

There are one or two small bills not yet paid, but they will not make the total cost exceed the appropriation of one thousand dollars.

The work of securing the eggs was in charge of Mr. O. H. Daniels, an experienced fisherman.

Only two hundred and sixty thousand eggs were taken. The fish were late in coming on the spawning-beds, and then did not show up in large numbers.

The trout in this lake are much smaller than at Newfound, requiring at least four times as many fish to produce a given number of eggs. Another season, with good weather, there will be no difficulty in filling the house.

Keene Station.

The site selected for this hatchery is just below the old city reservoir, in the city of Keene, the water-supply coming from the reservoir.

The appropriation was one thousand dollars.

FINANCIAL STATEMENT.

Paid	F. K. Burnham, for house . . .	$485.00
	A. Wheeler, varnish	16.35
	Keene Water-Works, iron pipe . .	40.90
	E. P. Sebastian, sundries . . .	44.55
	F. K. Burnham, troughs, lumber, etc. .	180.12
	For 1 pail	.40
		$767.32

No eggs have been collected at this hatchery. Breeding-ponds will be constructed in the spring, and a stock of brook trout will be put in for breeding purposes.

For some years all of the landlocked salmon eggs for stocking our waters were procured from Grand lake, in Maine. These eggs could not be obtained from any other source. The average cost was about three dollars per thousand. The experiment of taking these eggs at Sun-

apee lake proving successful led the commissioners to believe that they could obtain a sufficient number at Newfound lake for stocking such other waters in the State as were adapted to this king of game fishes, they taking the view that even if the eggs cost the same as they did in Maine, the money would be paid out in the State to our own people. Accordingly arrangements were made to put in a weir on Hebron river, at the head of Newfound lake.

This weir was put in the first of October. The first two nights fourteen fine salmon were taken The next night the heavy rain raised the river two or three feet, sweeping the nets entirely out and allowing the fish to pass by; the nets were put back as soon as the water would allow, only to be swept out again the next day. Before they could be replaced most of the fish had gone up the river. When in the shoal water where they spawn, they fall an easy prey to a few individuals who have done all they could to destroy the salmon planted in this river at great expense by the State. Notwithstanding the unfavorable conditions of the river, fifty thousand eggs were taken and are now in the Plymouth hatchery. Had it not been for the freshets, a large number of eggs could have been secured for less than one third what they have usually cost.

ELLIOTT B. HODGE,
Superintendent.

REPORT OF B. P. CHADWICK.

To the Fish and Game Commissioners:

GENTLEMEN, — As fish and game detective of the State, appointed to enforce the fish and game laws, I respectfully submit the following report:

Early in the month of May I was notified that the laws in relation to lobsters were being constantly violated in the vicinity of Portsmouth. I immediately investigated the subject, and as a result the following-named parties have been arrested and fined for violating the law:

May 14, C. W. Lolley, of Portsmouth, fined $20 and costs.

Aug. 27, Warren Caswell, of Rye, fined $80.

Sept. 4, C. H. Baker, of Nashua, fined $120 and costs.

Sept. 9, Edward Downs, of Rye, fined $30 and costs.

Sept. 11, George Locke, of Rye, fined $50 and costs.

All of the parties plead guilty to the offence. As this was the first time that the parties had been called to answer to an offence of this kind, it was thought proper not to inflict the full penalty of the law. Several other complaints have been sent me, but owing to want of sufficient evidence to convict, the parties have not been arrested. The law in relation to female lobsters, bearing eggs, is sadly deficient. The offence as the law now stands is for killing, and not for catching or selling. It should be amended so as to make it an offence to catch or sell, but a person catching a lobster bearing eggs, and returning the same immediately to the waters, should be exempt from

such penalty. All egg-bearing lobsters should be immediately returned to the water when caught; this alone would be the means of saving millions of eggs that are now annually destroyed, and be a step in the right direction towards replenishing the waters of the coast with young lobsters. The lobster-bearing grounds extend along the coast for a distance of about ten miles, furnishing a fair paying employment to a large number of men. The demand for lobsters is largely increasing, while the supply is gradually diminishing. The only remedy for this condition of affairs is the enforcement of the law protecting the young and the extending of the close season from August 1 to September 15, for this reason: when the lobster is shedding its shell its meat becomes soft, and as an article of food is comparatively worthless and should be excluded from our markets; and owing to the perishable nature of the lobster a large number of the dealers do not desire to handle them during the month of August. The industry is certainly worth preserving, and, with proper restrictions, should become much more productive. Fish are wonderfully prolific, the waters of the State are abundant and most admirably adapted to fish culture, and at present what seems to be needed is legislative assistance, such as will fully protect the young of all our species of food fish.

Hunting and fishing on the Lord's day is largely on the increase, much to the annoyance of the large portion of the community who respect the Sabbath day. Fishing on the Lord's day should be made an offence, as two thirds of all the violations of the fish and game laws occur on the Sabbath day.

Respectfully yours,

B. P. CHADWICK,

Detective of the State of New Hampshire.

MANCHESTER, December 1, 1890.

LIST OF FISH COMMISSIONERS OF UNITED STATES AND CANADA.

THE UNITED STATES.

Col. Marshall MacDonald, commissioner, Washington, D. C.
Capt. J. W. Collins, assistant in charge of fisheries division.
Richard Ratburn, assistant in charge of scientific inquiry.
George H. H. Moore, superintendent of distribution.
T. H. Bean, ichthyologist and editor.
I. I. O'Connor, chief clerk.
John Gay, inspector of stations.

ALABAMA.

Col. D. R. Hundley, Madison.
Hon. Charles S. G. Doster, Prattsville.

ARIZONA.

T. W. Otis, Prescott.
John Howard, Prescott.
C. W. Stearns, Phenix.

ARKANSAS.*

H. H. Rottaken, president, Little Rock.
W. B. Worthen, secretary, Little Rock.
J. W. Calloway, Little Rock.

DOMINION OF CANADA.

Hon. John Tilton, deputy minister of fisheries, Ottawa.

Inspectors of Fisheries for 1888.

W. H. Rogers, Amherst, N. S.
A. C. Bertram, North Sidney, C. B., N. S.
W. H. Vening, St. John, N. B.

* This State has never made an appropriation for fish culture.

William Wakeman, Gaspé Basin, P. Q.
J. H. Duvar, Alberton, P. E. I.
Thomas Mowat, New Westminster, B. C.
Alexander McQueen, Winnipeg, Man.

Officers in Charge of Fish-Breeding Establishments.

S. Wilmot, superintendent of fish culture, Newcastle, Ont.
Charles Wilmot, officer in charge, Newcastle Hatchery, Ont.
William Parker, Sandwich, Ont.
L. N. Catelier, Tadoussac, P. Q.
Philip Vibert, Gaspé, P. Q.
A. H. Moore, Magog, P. Q.
Alexander Mowat, Restigouche, Matapedia, P. Q.
A. B. Wilmot, Bedford, N. S.
C. A. Farquharson, Sidney, N. S.
Isaac Sheasgreen, Miramichi, N. B.
Charles McCluskey, St. John River, Grand Falls, N. B.
Henry Clark, Dunk River, P. E. I.
Thomas Mowat, B. C. Hatchery, New Westminster, B. C.

CALIFORNIA.

Joseph Routier, Sacramento.
C. M. Joslyn, San Francisco.
J. Downey Harvey, San Francisco.

COLORADO.

Gordon Land, Denver.

CONNECTICUT.

Dr. William M. Hudson, Hartford.
James A. Bill, Lyme.
George C. Waldo, Bridgport.
Bryant A. Treat, Wallingford.

DELAWARE.

Charles Schubert, Odessa.
Dr. E. G. Shortedge, Wilmington.

GEORGIA.

J. H. Henderson, Atlanta.
Dr. H. H. Cary, La Grange, superintendent.

ILLINOIS.

N. K. Fairbanks, president, Chicago.
S. P. Bartlett, secretary, Quincy.
George Breuning, Centralia.

INDIANA.

W. T. Dennis, Richmond.

IOWA.

E. D. Carlton, Spirit Lake.
Ole Bjorenson, superintendent.

KANSAS.

S. Fee, Wamego.

KENTUCKY.

William Griffith, president, Louisville.
P. H. Darby, Princeton.
John B. Walker, Madisonville.
Hon. C. J. Walton, Mumfordville.
Hon. John A. Steele, Midway.
W. C. Price, Danville.
Hon. J. M. Chambers, Independence.
A. H. Goble, Catlettsburg.
J. H. Mallory, Bowling Green.

MAINE.

E. M. Stilwell, Bangor.
Henry O. Stanley, Dixfield.
B. W. Counce, sea and shore fisheries, Thomaston.

MARYLAND.

Dr. E. W. Humphries, Salisbury.
G. W. Delawder, Oakland.

MASSACHUSETTS.

E. A. Brackett, Winchester.
E. H. Lathrop, Springfield.
J. C. Young, Wellfleet.

MICHIGAN.

Herschel Whitaker, Detroit. Term expires January 1, 1891.
Joel C. Parker, M. D., Grand Rapids. Term expires January 1, 1893.
Hoyt Post, Detroit.

Walter D. Marks, superintendent, Paris.
George D. Mussey, secretary, Detroit.
William A. Butler, Jr., treasurer, Detroit.

MINNESOTA.

Robert Ormsby Sweeney, president, St. Paul.
William Bird, Fairmount.
Niles Carpenter, Rushford.
S. S. Watkins, superintendent, Willow Brook, St. Paul.

MISSOURI.

H. M. Garlichs, chairman, St. Joseph.
J. L. Smith, Jefferson City.
H. C. West, St. Louis.
A. P. Campbell, secretary, St. Joseph.

Superintendents.

Philip Kopplin, Jr., St. Louis.
Elias Cottrill, St. Joseph.

NEBRASKA.

William L. May, Fremont.
B. E. B. Kennedy, Omaha.
——— McBride, Lincoln.
M. E. O'Brien, South Bend, superintendent.

NEVADA.

George T. Mills, Carson City.

NEW HAMPSHIRE.

George W. Riddle, Manchester.
Elliott B. Hodge, Plymouth.
John H. Kimball, Marlborough.

Superintendent of Plymouth and Sunapee Hatcheries.

Com. E. B. Hodge, Plymouth.

NEW JERSEY.

William Wright, Newark.
Frank M. Ward, Newton.
J. R. Elkinton, Pennsgrove.

NEW YORK.

E. G. Blackford, president, New York.
William H. Bowman, Rochester.

A. S. Joline, Tottenville.
Henry Burden, Troy.

Secretary.

E. P. Doyle, Room 311, Potter Building, New York City.

Superintendents.

Fred Mather, Cold Spring Harbor,
Monroe A. Green, Caledonia.
James H. Marks, Bloomingdale, Adirondacks.
E. L. Marks, Sacanda.
E. F. Boehm, Mill Creek.

Shellfish Commission.

E. G. Blackford, commissioner, 80 Fulton Market, New York.
William G. Ford, engineer, 80 Fulton Market, New York.
J. W. Merserau, oyster protector, 80 Fulton Market, New York.

NORTH CAROLINA.

No commission.

OHIO.

C. V. Osborn, president, Dayton.
A. C. Williams, secretary, Chagrin Falls.
John Hofer, Bellaire.
John H. Law, Cincinnati.
Hon. Emory D. Potter, Toledo.
Thomas D. McNott, Sandusky, superintendent.
L. K. Buntain, Dayton, chief warden.

OREGON.

F. C. Reed, president, Clackamas.
E. P. Thompson, Portland.
R. C. Campbell, Ranier.

PENNSYLVANIA.

Henry C. Ford, president, 524 Walnut street, Philadelphia.
James V. Long, corresponding secretary, 75 Fifth avenue, Pittsburg.
H. C. Demuth, secretary of board, Lancaster.
S. B. Stilwell, Scranton.
A. S. Dickson, Meadville.
W. L. Powell, treasurer, Harrisburg.
L. Streuber, Erie.

Superintendents.

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William Buller, Corry.

RHODE ISLAND.

J. M. K. Southwick, Newport.
Henry T. Root, Providence.
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SOUTH CAROLINA.

Hon. A. P. Butler, Columbia.

TENNESSEE.

W. W. McDowell, Memphis.
H. H. Sneed, Chattanooga.
Edward D. Hicks, Nashville.

UTAH.

A. Milton Musser, Salt Lake City.

VERMONT.

Herbert Brainard, St. Albans.
F. H. Atherton, Waterbury.

VIRGINIA.

Dr. J. T. Wilkins, Bridgetown.

WEST VIRGINIA.

C. S. White, president, Rumney.
F. J. Baxter, treasurer, Sutton.
James H. Miller, secretary, Hinton.

WISCONSIN.

The Governor, *ex officio.*
Philo Dunning, president, Madison.
C. L. Valentine, secretary and treasurer, Janesville.
Mark Douglas, Melrose.
A. V. H. Carpenter, Milwaukee.
Calvert Spensley, Mineral Point.
E. S. Miner, Sturgeon Bay.
James Nevin, Madison, superintendent.

WYOMING.

Louis Miller, Laramie.

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